

Scientific Management and Stakhanovism in the Soviet Union: A Historical Perspective

Arthur G. Bedeian

Louisiana State University, and

Carl R. Phillips

Southeastern Louisiana University, USA

An appreciation of the origins of Soviet attitudes towards work is as important for understanding Soviet society as is the Protestant work ethic for understanding modern Western society[1]. While the intellectual legacy of Max Weber[2] is clearly established as regards the latter, a historical understanding of the development of Soviet ideas concerning work is less well known. The purpose here is to address this imbalance by comparing and contrasting the development of "scientific management" and "Stakhanovism" during the 1920s and 1930s.

Scientific management and Stakhanovism were both popular in the Soviet Union during the 1920s and 1930s as the means for increasing productivity and industrial growth. Popularised by Frederick W. Taylor[3], scientific management influenced Lenin during the 1920s, while Stakhanovism was popular with Stalin during the 1930s. Although both movements had the same ultimate goal, the approaches they incorporated were quite distinct. Taylorism or scientific management was to be implemented by enterprise managers, whereas individual rank-and-file workers led the drive for increased productivity in the Stakhanovite movement. For the most part, however, scientific management in the Soviet Union only existed in theory — it was never really implemented. In contrast, Stakhanovism was fully enacted throughout the Soviet Union.

While isolated English language references to scientific management and Stakhanovism in the Soviet Union can be located, the extant literature dealing with both movements has yet to be assembled. Consequently, numerous unanswered questions surrounding both movements exist. For example, to what extent did scientific management influence Lenin? How was scientific management promoted in the Soviet Union? How was it practically applied? Who was Alexej Kapitonovic Gastev? Similar questions exist with respect to Stakhanovism. To what extent did Stakhanovism influence Stalin? How was Stakhanovism promoted? Who was Alexei Stakhanov, the movement's namesake?

Scientific Management in the Soviet Union

Lenin's Views

To the extent that Lenin conveyed an ideological message on scientific management, which he called "capitalism's last word", his thoughts evolved

over time[4]. As early as 1913 he contended that scientific management was an oppressive tool to exploit workers for the profits of greedy capitalists. Writing in *Pravda*, he had the following to say about scientific management, or that term rendered into Russian, *nauchnaya organizatsija trauda*:

Its purpose is to squeeze out of the worker three times more labour during a working day of the same length as before; all the worker's strength is unmercifully roused, every bit of nervous and muscle energy is drained from the slave labourer at three times the speed . . . Advances in the spheres of technology and science in capitalist society are but advances in the art of extortion of sweat[5].

Just a year later, however, Lenin's assessment of scientific management reflected a more pragmatic and less ideological tone. Writing in *Put Pravdy*, he described scientific management as a "national, logical distribution of labour within the factory and the elimination of superfluous motion"[6]. For the most part, this attitude change was brought about by an industrial decline within the Soviet Union. By 1918, large industry output was one-third that of the pre-First World War level. Productivity had been reduced to a minimum as a result of class conflict, the revolutionary politisation of workers, and rampant starvation. In an effort to stop this industrial decline, Lenin centralised political and economic decision making[7].

Lenin saw the future of socialism as being bound to the new Soviet Republic's ability to combine the best of its rule and organisation with the best of the new Taylor system. He explained:

We should try out every scientific and progressive suggestion of the Taylor system . . . The last word of capitalism in this respect — the Taylor system — as well as all progressive measures of capitalism, combine the refined cruelty of bourgeois exploitation and a number of most valuable scientific attainments in the analysis of mechanical motions, during work, in eliminating superfluous and useless motions in determining the most correct methods of work, the best systems of accounting and control, etc. The Soviet Republic must adopt valuable and scientific technical advances in this field. The possibility of socialism will be determined by our success in combining the Soviet rule and the Soviet organisation of management with the latest progressive measures of capitalism. We must introduce in Russia the study and the teaching of the new Taylor system and its systematic trial and adaptation[8].

Lenin so recognised the importance of scientific management to the future of socialism that he had originally planned to devote an entire section in his *Notebooks on Imperialism* to Taylor's work[9].

Lenin, nevertheless, still saw a negative side to scientific management. He felt that the capitalistic labour process proceeded at the expense of worker health and well-being. However, he believed that scientific management's positive aspects, namely improved productivity, could be extracted from the capitalist system and employed in a socialist manner.

Educational Efforts

To advance the cause of industrial redevelopment and to educate the Soviet populace regarding scientific management, Lenin formed (in 1918) the League for the Scientific Organisation of Work. The League's primary purpose was to study scientific management and industrial psychology. To this end, various

laboratories were established to simulate factory conditions for the study of psychophysical work variables[10]. Also established in 1918 was the Time League, *Liga Vremya*, which educated workers on time and motion study, introducing them to the ideas of efficiency and time thrift. Additionally, the Moscow Central Labour Institute, *Tsentral'nyi Institut Truda*, trained skilled workers under simulated factory conditions.

To reorganise the Soviet industrial system and develop a unified programme of national production, two All-Russian Scientific Management Conferences were convened in Moscow in 1921 and 1924[11]. Out of the first conference came the Central Council of Scientific Organisation of Labour whose primary purpose was to organise the efforts of 60 institutes devoted to the study of work, the application of time and motion study, and worker training.

The Russian Taylor

Born in 1882, Alexij Kapitonovic Gastev has been called the "Soviet Taylor". At the conclusion of the October Revolution, two events occurred which had a longlasting and major impact on Gastev and his Soviet comrades. Gastev was elected to the Central Council of the Petrograd Works and, subsequently, became the First Secretary of the All-Russian Metal Workers' Union. These two positions led him to found the Central Institute of Labour, whose purpose was to study scientific management and to promote its use in factories throughout the Soviet Union.

Gastev, originally known as the most popular of the "worker-poets", became the leading member of the *Proletkult*, a mass cultural organisation consisting of nearly half a million members who wrote "proletarian factory poetry". This poetry attempted to arouse positive feelings among Russians towards technical and industrial development.

In numerous speeches, Gastev called for a scientific management revolution in the Soviet Union. Although, for the most part, he agreed with Taylor's concept of scientific management, he felt that it was more than just a national theory of production and organisation. He believed that scientific management did not just belong in the factory; rather, he felt that all aspects of life should be mechanised.

Gastev believed that the mechanisation of human labour was a totally organic process and not as unnatural as some thought. All citizens, according to Gastev, should master the two fundamental aspects of the work process — "the stroke and the thrust". He felt that this learning should begin at an early age, a message he conveyed in numerous speeches throughout the Soviet Union to children's groups. An example of the "stroke and the thrust" process was the training programme developed by the Central Institute of Labour. After workers were brought into a laboratory, they assumed a specific position with their feet being in a set stance. Then they exercised their fingers, hands, elbows, arms, and, ultimately, their entire bodies. According to Gastev, this created the "biomechanics of the stroke". Next the workers were required to make striking motions, being paced by a metronome. Thus, Gastev felt that workers should learn to make regular movements and be trained to work at an automatic pace.

Gastev felt that the real significance of these exercises was that they could reduce the training time for apprentices from three years to three months.

In 1992, in an effort to promote rational labour management, the Central Institute for Labour distributed thousands of copies of Gastev's pamphlet, "How Work Should Be Performed". This pamphlet stressed that work should be performed at a steady pace, that workers should not become "heated" during breakdowns, and that unnecessary objects should not be allowed to clutter a workplace. Gastev's pamphlet became popular and received a great deal of attention and notoriety. Eventually, at Lenin's insistence, it was hung in the reception room of the Kremlin.

Gastev remained the director of the Central Institute for Labour until 1938; at that time, the Institute was eliminated by Stalin in an effort to help rid the Soviet Union of Western influences. Not much is known about Gastev's death. Traub notes that Gastev may well have been executed by a firing squad[7]. The *Large Soviet Encyclopedia* gives 1941 as the year of his death.

Application of Scientific Management

Although Lenin favoured scientific management, many of its ideas were never implemented in the Soviet Union. By 1922, scientific management had only been introduced into a few Russian factories and then only on a piecemeal basis. The Central Workers' Institute, whose purpose was to experiment with Taylor's ideas, did not have stopwatches, training aids, food for trainees, fuel for heating classrooms, and relied on wooden machinery to simulate factory conditions[12]. A 1927 study commissioned by the International Labour Office (Geneva) noted that the Soviet Union had implemented few of the scientific techniques in which it so ardently believed. The two All-Russian Scientific Management conferences, as well as other mass educational efforts, had been primarily theoretical in nature and had done little to promote scientific management in practice. Scientific management techniques, with the exception of functional foremanship, for the most part, never made it from the institutional laboratories to the factory floor.

Taylor's "functional foremen" concept was introduced in the Soviet Union in the 1920s. Authority was placed in the hands of technical specialists who were responsible for different phases of factory work. The use of functional foremen lasted until the 1930s when they were replaced by a line-staff structure as a result of a chaotic usurpation of plant manager authority. Stalin's rise to power in the late 1920s would put an end to all scientific management efforts in the Soviet Union for almost four decades. He felt that the Soviet Union should not rely on and use technological information from capitalist countries[13].

Stakhanovism

The Soviet Schmidt

In the 1930s, a man by the name of Alexei G. Stakhanov became very famous after setting numerous productivity records. This feat would later lead to a movement throughout the Soviet Union bearing his name. Because of his superior performance, he has been compared to Henry Knolle, the Pennsylvania Dutchman who performed so well for Frederick W. Taylor during his famed pig-iron experiment[14].

In a speech at the First All-Union Conference of Stakhanovites in 1936, V.M. Molotov gave the following account of the Stakhanovite movement. Stakhanov was born in Donbass at the turn of the century to a poor peasant family. At the age of 12, he began working at the mill of *kulak* (a well-to-do farmer who opposed Soviet land collectivisation). In 1927, he went to work at the Irmins Mine where he trained as a coal hewer, qualified in the use of a pneumatic drill. Later he studied for the state technical minimum examination, passing with excellent marks[15].

In 1935, while working as a coal miner, Stakhanov performed a superhuman feat. During one shift, he cut 102 tons of coal — 15 times the normal output. He did this by arranging his work team so that he alone used an automatic coal-cutting tool, while other members of his team did propping and other subsidiary tasks. The work was thus based on a specialised division of labour. In this respect, it was similar to Taylor's idea that work should be limited to a single leading function.

Soon thereafter, other workers, inspired by Stakhanov, began to set output records. Meetings and addresses were held to describe and promote the work of Stakhanov and his cohorts. In November 1935, three months after Stakhanov set his coal-cutting record, the first All-Union Conference of Stakhanovites was held. Addressing the conference, Stalin encouraged attendees to follow the lead of Stakhanov and become superproductive.

Accordingly, Soviet workers could become known as a "Stakhanovite" by producing between 130 and 150 per cent of their standard work norm. Those who produced above the norm, but not up to this level, were known as *udarniki* (shock workers) — a position of less status and honour[16]. Stakhanovites were rewarded with increased pay, better jobs, and social and political recognition. Many ultimately became Communist Party officials and deputies of the Supreme Court.

Application of Stakhanovism

By July 1938, 29 per cent of all union members in the Soviet Union (they accounted for 80 per cent of all workers) were designated as Stakhanovites and by the next year, this figure had risen to 34 per cent. Stalin, speaking at the First All-Union Conference, described typical Stakhanovites as being young or middle-aged, having cultural and technical knowledge, showing precision and accuracy in their work, being able to appreciate the time factor in their work (not only counting the minutes but also the seconds), having passed the technical minimum examination, and continuing their technical education. Additionally, Stalin noted they were generally free of the conservatism of business executives, engineers, and technicians, created new and higher standards of output, introduced amendments into the designed capacities and economic plans drawn up by industrial leaders, supplemented and corrected what engineers and technicians had to say, and taught the latter since they had completely mastered the techniques of their jobs and, therefore, were able to produce at a maximum level[13].

Generally, the Stakhanovite movement emphasised higher labour productivity

based on socialist competition. Stalin felt that the Stakhanovite movement created the possibility of converting the Soviet Union into the "most prosperous of all countries" [13, pp. 15-6]. He also felt that the Stakhanovite movement was significant since it had the ability to smash old output norms and, as a result, had the real possibility of surpassing the labour productivity of capitalist countries. Additionally, he considered the Soviet movement important since it prepared conditions for a transition from socialism to communism.

Stalin noted two important features of the Stakhanovite movement. First, the movement began from below, with workers, rather than as a result of pressure from top administrators. Stalin felt strongly that this was the major reason that Stakhanovism was the most vital and irresistible movement of the time. Second, Stakhanovism spread with unparalleled speed over *all* of the Soviet Union.

According to Stalin, the rapid spread of the Stakhanovite movement could be attributed to four causes. First, it radically improved the material welfare of workers. As a result of higher productivity, people lived better and enjoyed life more. Second, Stalin felt that the non-exploitation of workers contributed significantly to the movement's popularity. In discussing this factor, he compared it to that under capitalism.

Under capitalism labour bears a private and personal character. You have produced more — well then, receive more, and live as best as you can. Nobody knows you, or wants to know you. You work for the capitalists, you enrich them? Well, what do you expect? That is why they hired you so that you should enrich the exploiters. You do not agree with that? Well, join the ranks of the unemployed and exist as best as you can. We shall find others, more tractable. That is why people's labour is not valued very highly under capitalism [13, p. 21].

Stalin described the Soviet system in the following manner:

Here the man who labours is held in esteem. Here he works not for the exploiters, but for himself, for his class, for society. Here the man who labours cannot feel neglected and solitary. On the contrary, the man who labours feels himself a free citizen of his country, in a way a public figure. And if he works well and gives society all he can — he is a hero of labour and is covered with glory [13, p. 21].

Third, Stalin felt that the Stakhanovite movement came about largely from the Soviet Union's industrialisation, the reconstruction of mills and factories, new techniques, and new machinery. Fourth, he noted the significance of capable workers. The movement would have been impossible without workers who were capable of learning the techniques and using and promoting them.

At the same time, the Stakhanovite movement did not have the widespread support of Soviet plant managers. Many managers were afraid that Stakhanovites would infringe on the entire order of plant work, breaking rules imposed by technological processes. Generally, Stakhanovites undermined departmental subordination and the authority of both technical staff and line managers. Additionally, they often overfilled production assignments causing lasting work rhythm disorganisation [17,18].

Berliner [19] notes that managerial opposition was not based on increased labour productivity, where an increase occurred. Rather, it was based on the

disorganising effect that the movement had on the total production process. Sporadic outbursts in certain shops and not in others resulted in disproportions between shops or between sections of the same shop. Overwork of machines led to breakdowns, while overwork of men resulted in lower quality output. Procurement problems were created by sudden increases in the demand for certain materials to keep the Stakhanovites busy. Increased output often was accomplished without regard to safety.

Stalin and his comrades, however, encouraged Soviet managers to direct, help, initiate, and inspire the Stakhanovite movement. Many managers were unable to manoeuvre between government, Stakhanovites, and workers and thus had to relinquish their positions to those who could.

The end of the 1930s saw a diminution of the Stakhanovite movement. This probably was due to the mass production problems it created and general managerial opposition. Since the Second World War, there has been little reference to this movement.

Conclusion

Both scientific management and Stakhanovism had the same ultimate goal — increased productivity. The approaches they incorporated, however, were quite distinct, reflecting differences in their roots and how they were to be implemented. Scientific management was developed in the United States while Stakhanovism originated in the Soviet Union. Additionally, scientific management was to be carried out under the direction of enterprise managers. Conversely, the initiative in Stakhanovism came from individual rank-and-file workers. For the most part, however, scientific management in the Soviet Union only existed in theory — it was never really implemented. In contrast, Stakhanovism was fully enacted throughout the Soviet Union with immediate results. The present work offers a first-cut effort at comparing and contrasting these two important movements as a means of establishing the historical context in which Soviet attitudes towards work developed. Both scientific management and Stakhanovism can be regarded as significant precursors to the contemporary worldwide effort to increase industrial productivity[20].

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