Special theme section: Eisenstein, Bogdanov, and the organization of culture

Aleksandr Bogdanov, 'Science and the Working Class'

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Introduction by Fabian Tompsett

The following text consists of fourteen "Theses" published in advance of a presentation delivered by Aleksandr Bogdanov (1873–1928) on 17 September 1918 to the First All-Russian Conference of the Proletkults held in Moscow from 15–20 September 1918. The "Theses" were published in advance of the Conference in the journal *Proletarskaya kul'tura*, No.2 (July, 1918), pp. 21–23.¹

In his footnote to the "Theses", Bogdanov states that the theoretical foundations of his forthcoming presentation could be found in the brochure 'Science and the Working Class', which was based on an earlier presentation which he delivered to a Conference of the Moscow Proletkults in February 1918. He is probably referring to *Nauka i rabochiy klass* (Moscow, Soyuz rabochikh potrebitel'nykh obshchestv goroda Moskvy i ee okrestnostey), 16 pp.

The text of the presentation of February 1918 can also be found in:

Sotsializm nauki (Nauchnye zadachi proletariata) (Izdatel'stvo zhurnala "Proletarskaya kul'tura", Moscow, 1918);

'Nauka i rabochiy klass', in *O proletarskoy kul'ture 1904–1924* (Moscow & Leningrad, "Kniga", 1925), pp.200–221;

Voprosy sotsializma. Raboty raznykh let (Izdatel'stvo Politicheskoy Literatury, Moscow, 1990).

The text of the presentation of 17 September 1918 was published in the protocols of the Conference: *Protokoly Pervoy Vserossiyskoy konferentsii proletarskikh kul'turno-prosvetitel'nykh organizatsii, 15–20 sentyabrya 1918 g.* (Edited by P.I.Lebedev-Polyanskiy (Moscow, Izdatel'stvo "Proletkarskaya kul'tura", 1918), pp. 31–36; and under the title 'Nauka i proletaria', in: *O proletarskoy kul'ture. Stat'i 1904–1924* (Leningrad and Moscow, 1925), pp.222–230 [in this anthology, owing to a misprint, the presentation is dated "1913"].

A French translation 'La science et la classe ouvrière', by Blanche Grinbaum of 'Nauka i rabochiy klass', appeared in *La science, l'art et la classe ouvrière* (Bogdanov 1977). However the accompanying bibliographical information was incorrect. We have added annotation to the present translation for ease of comprehension for a modern readership. Minor formatting changes have also been made.

1 See Biggart, Gloveli, and Yassour 1998.

Translation by Fabian Tompsett

1. To say that the class character of science resides in the fact that it *defends the interests* of a given class betrays either a journalistic understanding of science or is a complete misrepresentation. An actually existing science may be bourgeois or proletarian by its very “nature”, that is to say in terms of *its origin, its point of view, and the methods by which it is elaborated and explained*. In this fundamental sense, all the sciences, not only the social sciences but all the other sciences, including mathematics and logic, may be said to have, and actually do have, a class character.²

2. The nature of science resides in the fact that it is *the organized, collective experience of people* and that it serves as *the instrument of the organization of the life of society*. The current dominant science, in its various branches, is *bourgeois science*: it has been developed, for the most part, by representatives of the bourgeois intelligentsia, who have concentrated in it the material experience that was available to the bourgeois classes; who have understood it and interpreted it from the point of view of these classes; and who have organized the processes and practices to which these classes were accustomed, which were characteristic of them. As a result, this science has served and continues to serve as an instrument of the bourgeois structuring of society, firstly as an instrument of the struggle with, and conquest of, the bourgeoisie over the classes that had had their day; and then as an instrument of their rule over the labouring classes. At all times this science has served as an instrument for the organization of production and for all of the progress in production that has been achieved under the leadership of the bourgeoisie. Such is the organizing strength of this science. But here also resides its historical limitation.

3. This limitation is manifest in the very material of science, that is to say in the content of experience that it organizes, and it is especially evident in the social sciences. For example, in studying the relations of production, bourgeois science could not grasp or discern a particular form of cooperative labour, the comradely or collectivist form, which is in fact the highest form, because this form was virtually unknown to the bourgeois classes.

Even more significant is a *fundamental limitation of point of view* that affects all of the bourgeois sciences and which is determined by the position of the bourgeois classes in the social system, and consequently, by their very social being. This particular limitation derives from the *separation of science from its real basis: social labour*.

4. This separation has its origins in a differentiation between mental and physical labour. In itself, this differentiation does not preclude an awareness of the indissoluble link between practice and theory in the social process as an integral whole. But for the bourgeois classes the integral nature of this link is invisible; it lies outside their field of vision. They have been educated in terms of the individualistic economy, to think in terms of private property and of market competition; they have therefore acquired an *individualistic* consciousness, and the social nature of science is incomprehensible to them. For them, science is not the organized experience of collective labour and an instrument for the organization of collective work; for them, knowledge is something in itself, even something that is opposed to practice, something that is of an “ideal” or “logical” nature, which, even when it manages and guides practical activity, does so only by virtue of its higher nature, and not because it has arisen out of practical activity or because it is been acquired in order to be used in practical activity. This particular *fetishism* can be described as the “abstract fetishism of knowledge”.

5. The bourgeois world developed, in every sphere of its creative activity, the scientific sphere included, along lines of ever increasing *specialization*. Science became fragmented into branches that increased in number and diverged at the expense of vital interactions between these branches. The individualistic separation of people accentuated this process, because although specialists working

2 For an alternative English translation of this first paragraph, see Lecourt 1977.

in the same sphere still needed to share their experience and ideas, specialists working in different spheres were less bound by this necessity. The consequence was a huge loss of coordination in science just as there was a loss of coordination in capitalist society. The development of both science and society followed the same anarchic path.

What all of this means is that bourgeois science, whilst it accumulated in all its branches an enormous wealth of knowledge and of methods for exploiting that knowledge, has been unable to assemble this material into a planned, organized and integrated whole. Each specialism has created a language of its own that has become incomprehensible not only to the broad masses but even to scientists of another specialism. The same correlations, the same links in experience, the same processes of cognition are studied in different branches as if they are quite different things. The methods of one branch only penetrate into other branches with much delay and difficulty. This is the origin of the narrow, professional outlook that develops amongst people working in science, weakening and acting as a brake on their creative activity.

6. The development of machine production, which brought about a unity of technical methods, stimulated a trend in science for the unification of methods and an overcoming of the harmful aspects of specialization. Much has been achieved along these lines, but as long as the fundamental divide between the individual branches of science remains, this trend will be effective only in some sectors, and will not result in the integrated organization of science as a whole.

7. Bourgeois science, with its laborious, obscure and complicated professional language is scarcely accessible to the working class. Furthermore, in so far as it has become a commodity in capitalist society, it sells at a high price. If individual representatives of the proletariat, at a cost of enormous expenditure of energy, become masters of one or another branch of science, the class character of science comes into play: the gulf between science and the principle of collective work, make for an estrangement in their lives from the interests and mentality of the working community from which they emerged. Here, professional narrowness and a tendency towards intellectual aristocratism converge. In a word, bourgeois science, given that it is a bourgeois ideology in origin³ organizes the soul of the proletariat according to the bourgeois model.

8. What this means is that the working class has specific tasks to carry out in relation to contemporary science:

science must be reinterpreted from a proletarian point of view, both in its content and in the form in which it is taught;
the creation of a new organization, both for the elaboration of science and for the dissemination of scientific knowledge amongst the working masses.

In most branches of science, accomplishing these tasks will entail a methodical assimilation of the legacy of the old world; but in some branches there will be a need for profound and far-reaching innovation.

9. A reinterpretation of the content of science must first of all abolish the divide that separates science from the collective-labour principle: the material of science must be understood and explained as being the practical experience of humanity; the schemas, conclusions, and formulae of science must be seen as tools for organizing the entire social practice of people. At the moment, this work is being carried out almost exclusively in the social sciences, but the approach is insufficiently planned and organized; this work must be extended to all fields of knowledge. This transformation will bring science close to the life of the working class: astronomy as the science that explains the orientation

3 "Our usual ideas about the social relations between people imply *mutual understanding* as their first precondition. (...) What is the essence of this mutual understanding? It is contained in a common language and the sum of concepts which are expressed by this language, in what is called common "culture" or, more exactly, ideology" *Bogdanov's Tektology Book I* (Bogdanov 1996).

of work processes in time and space; physics as the science of the resistances encountered in the course of the collective work of humanity; physiology as the science of labour power; logic as the theory of the social harmonization of ideas – given that ideas are also organizational instruments of labour – all of these sciences will enter into the consciousness of the proletariat more directly, more easily and more deeply than they do in their present form.

10. We must also strive to overcome the fragmentation of science that has come about in the course of specialization: our objective must be the unity of scientific language and a convergence and generalizing of the methods of the various branches of knowledge, not only within the sphere of knowledge but also in relation to the various spheres of practice, so that a total monistic system can be developed, comprising both domains. The realization of this goal will be expressed in a *universal organizational science*, a science that is needed by the proletariat as the future organizer of the whole life of humanity in all of its aspects.

11. With regard to the forms in which science is taught, here, what is needed is a degree of simplification, without prejudice to the essence of what is being taught. Recently, the work of a number of democratizers of science has shown how much can be achieved in this respect, by discarding useless scholastic ballast and by avoiding repetition of identical principles when they are encountered under different names in related branches of science. A significant degree of simplification will be achieved by the very reinterpretation of science from the point of view of collective labour, since this will liberate science from the abstract fetishism which, in the old mathematics, mechanics, logic, and other sciences, frequently resulted in so many pseudo-problems and unnecessary stratagems being presented as “evidence”.

12. A reinterpretation of the content and a transformation of the external form of science will mean that “socialism” will become its foundation, which is to say that science will become adapted to the tasks of the struggle for, and construction of, socialism. The dissemination of knowledge and of scientific work must be organized in parallel. The two processes are inextricably linked. The means for actually achieving these ends will be the *Workers’ University* and the *Workers’ Encyclopaedia*.

13. The Workers’ University must be a system of cultural-educational institutions that operate at various levels and culminate in a single centre for the training and organization of scientific forces. At each level of the system, general educational courses must be complemented by special, practical and scientific-technical courses that are of use to society. The unity of principle that underlies the programme, and links together the various levels and complementary courses must not inhibit initiatives to perfect particular programmes or particular teaching methods. The basic form of relationship between teachers and students should be comradely co-operation, in which the competence of the former is not taken to justify an unaccountable exercise of authority, and the trustfulness of the latter does not degenerate into passivity and an inability to criticize. The principal goal of teaching should be a mastery of methods.

14. The development of these educational courses, and the publishing activity of scientific workers of the Workers’ University which is part of this development, should be directed towards the creation of a Workers’ Encyclopaedia, which should not be a mere compilation of the findings of science, but a complete, harmoniously organized system of explanation of the methods of practice and cognition and of the vital links between them.

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