

SOCIETY FOR FREEDOM IN SCIENCE

(Dr John R. Baker, Secretary)

University Museum
Oxford

11th December, 1946,

Professor K. S. Krishnan, F.R.S.,
Physics Laboratory,
University,
Allahabad, India.

Dear Sir,

Professor M. Polanyi has suggested to me that I should send you the statement of the objects of this Society. He believes that you are in general sympathy with our movement. I should be happy to give you any further information about the Society that you may desire. I enclose a list of members, probably containing the names of some of your acquaintances, who will also be able to tell you something about us.

Yours truly,

John R. Baker

The Society for Freedom in Science

*Its Origin, Objects
and
Constitution*

Third edition, July 1953

THE SOCIETY FOR FREEDOM IN SCIENCE
ITS ORIGIN, OBJECTS, AND CONSTITUTION
(Third edition, July 1953)

I

The Society for Freedom in Science is an international organization, founded in Great Britain in 1940. Its objects are to foster belief in the ideas briefly summarized in the five propositions printed below. Everyone who wishes to join the Society must give his formal assent to them.

(1) The increase of knowledge by scientific research of all kinds and the maintenance and spread of scientific culture have an independent and primary human value.

(2) Science can only flourish, and therefore can only confer the maximum cultural and practical benefits on society, when research and publication are conducted in an atmosphere of freedom.

(3) Scientific life in universities and other responsible bodies of similar nature should be autonomous and not subject to outside control in the appointment of personnel or in the distribution of any public funds allocated to them for scientific purposes.

(4) The conditions of appointment of research workers at universities should give them freedom to choose their own problems within their subjects and to work separately or in collaboration as they may prefer. Controlled teamwork, essential for some problems, is out of place in others. Some people

work best singly, others in teams, and provision should be made for both types.

It is, of course, legitimate for a university or similar body to advertise a vacancy in a research-team that is attacking a particular problem in pure science, and anyone who voluntarily enters such a team cannot expect the university to continue to employ him if he leaves the team to take up independent research. Freedom in science would only be infringed if it became a usual requirement at universities that new members of the staffs of scientific departments must enter research-teams.

(5) Scientists in countries not under dictatorial rule should co-operate to maintain the freedom necessary for effective work and to help fellow-scientists in all parts of the world to maintain or secure this freedom.

II

From the time of the classical Greek philosophers till about the end of the second decade of the present century, it was universally agreed throughout the civilized world that science was valuable not only because it helped to meet man's material needs and desires, but also because it increased his understanding of the universe. It was taken for granted that understanding—or *lux*, as Francis Bacon called it—was a proper object for human endeavour, and nearly everyone (though in this respect Bacon was an exception) thought that this object could only be achieved if scientists were given as much freedom as possible to follow their bent and to choose the subjects of their own researches. When people debated about the "freedom of science" in the nineteenth century, they were not thinking about the freedom of research-workers, since the necessity for that freedom was not questioned: the argument was confined to the problem whether teachers of science, in state schools and state universities, should be permitted to present certain doctrines to their pupils as representing established facts, when many qualified scientists regarded those doctrines as

hypothetical. If one searches the literature, one will find very few writings indeed in which any suggestion was made that scientists should not be free to choose the subjects of their research ; and it will be found difficult (or probably impossible) to find a single statement to the effect that science has material value only. Indeed, this idea seems to have entered no one's mind, not even Bacon's, though careless readers of his works have misrepresented his opinions on this subject.

III

In the early years of the Russian Revolution, the Soviet leaders appear to have been too busy with other matters to bring science into the general totalitarian scheme. Later on however a change occurred. Scientists began to find that the subjects of their research were being chosen for them by planning organizations, and were immediately related to practical ends. Little, however, was heard of these changes in the outside world, and the general body of scientists went their way in western Europe and America without any suspicion that a previously unknown outlook on the nature and purpose of science was gaining ground, and had in fact become the orthodox official view, in a large and powerful country.

The new doctrines were first made known in Great Britain at the International Congress on the History of Science held in London in 1931. The Congress was attended by a Soviet Delegation. The change of opinion that dates from that Congress was one of the most dramatic episodes in the history of science. At first the change was slow, but the new ideas gained adherents more and more quickly. By the end of the thirties, powerful propaganda for them already existed in Great Britain, while scarcely a voice was left to uphold the views that had dominated man's thinking on the subject for thousands of years.

One organization after another fell to the new ideology. Its effect was already felt at the Leicester

meeting of the British Association in 1933, and it became powerful in that body in 1936, when the economist, Sir Josiah Stamp (later Lord Stamp), gave the Presidential Address to the British Association at Blackpool. In 1938 the Association founded a new Division, called "The Division for the Social and International Relations of Science", and it soon became clear that the voices of those who were opposed to pure science and to freedom in science would be prominent in the activities of the new Division. The demands of war diverted the activities of most scientists to work having directly practical applications. The resulting change of outlook among many scientists was powerfully reinforced when the U.S.S.R. entered the war as Britain's ally. The ordinary meetings of the British Association, at which there would have been an opportunity for the free exchange of opinion, could not be held. The Association's new Division, however, continued to meet and became influential. It held a large and much-publicized congress at the Royal Institution, London, in September 1941. At this meeting the new tendencies in science reached their climax. No one was given the opportunity to speak during the three days of the congress except those previously invited by the organizers, and only two voices were raised against the prevailing trend. The Soviet Ambassador, Maisky, was the chairman at one of the meetings. It was here that he pronounced his famous dictum, "We in the Soviet Union never believed in pure science".

The Association of Scientific Workers adopted the new movement as a part of its policy and worked energetically on its behalf. Scientific journalists, even in traditionally liberal newspapers, poured forth propaganda for the central planning of science and for the orientation of all research towards practical ends. The newspapers reported meetings of the Association of Scientific Workers as though this body were representative of the thought of scientists as a whole. *Nature* repeatedly pleaded for the conscious planning of scientific research. Professor J. D. Bernal's book,

The Social Function of Science (Routledge, 1939), became a keystone of the movement against free science. In this work pure science was derided and compared in value with the solution of crossword puzzles (on p. 97).

IV

Meanwhile in Germany the Nazi regime had begun to undermine the idea that science had value as an end. "We do not know of or recognize truth for truth's sake", announced the Nazi Professor of Philosophy at Heidelberg University. There was, of course, much concentration of effort on military preparedness, and less emphasis than before on the value of pure science. Freedom of scientific research began to be attacked. "The idea of free and unfettered science," said Hitler, "... is absurd." An attempt was made to create a nationalistic "German" science. Propagandists for Nazism in other countries did not stress this side of their doctrine, however, and although the underlying ideas of the Nazis about science had much in common with those of the Marxists, they were far less influential in other countries.

V

While a radical change of outlook was sweeping all before it in Great Britain and certain other countries as a result of Marxist propaganda, the intellectuals either remained quiet or actively supported the revolution. Apart from a few small sporadic attempts nothing was done to present the case for pure science and free science. Many of the older scientists were disturbed, but felt it useless to try to stem the tide. In 1939, however, the first steps were at last taken. Prof. Michael Polanyi published a careful criticism of Prof. Bernal's book in an article entitled *Rights and Duties of Science*, subsequently reproduced in his book, *The Contempt of Freedom* (Watts, 1940). In the same year Dr. J. R. Baker independently published a criticism of Prof. Bernal's book (*New Statesman*, 29th July, 1939).

This attracted Prof. Polanyi's attention, and correspondence began.

In 1940 Dr. Baker sent a letter to 49 scientists, suggesting the formation of a society to promote the causes of pure science and of freedom in science. A group of three (Dr. Baker, Prof. Polanyi, and Prof. A. G. Tansley) met early in 1941 to draft a formal statement of beliefs. They drew up five "propositions", summarizing the objects of the Society; these were printed and widely circulated in May and June 1941. These propositions were nearly the same as those printed at the beginning of the present pamphlet. Scientists from many countries now joined the Society. A postal ballot was arranged, and an elected Committee replaced the provisional governing body. A subsequent postal election, followed by agreed co-options, resulted in the institution of the General Committee, which is now constituted as follows :

President :

Sir George Thomson, F.R.S.

Vice-Presidents :

Sir Henry Dale, O.M., G.B.E., F.R.S.

Prof. Michael Polanyi, F.R.S.

Sir Arthur Tansley, F.R.S.

Members :

Prof. V. H. Blackman, F.R.S.

Dr. L. E. Sutton, F.R.S.

Dr. F. Sherwood Taylor

Representative for the U.S.A.

Prof. P. W. Bridgman, For. Mem. R.S.

Hon. Secretary and Treasurer :

Dr. John R. Baker.

The Executive Committee consists of the President, Sir Henry Dale, Sir Arthur Tansley, and the Hon. Secretary.

Mrs. J. A. Spokes is the part-time Assistant Secretary of the Society.

VI

At first, progress was slow. The opinions of the Society were so much at variance with the prevailing trend, that it was found impossible to publish them in any suitable existing journal. *Nature* refused to publish the Society's Statement of Objects. The paper shortage and restrictions on new publications presented the officers of the Society with considerable difficulties. The Society worked at first almost entirely by duplicated typescript, circulated to members and others whose attention it was thought desirable to attract. At length, however, a few journals began to publish articles by members of the Society, and in 1942 Prof. Tansley delivered the Herbert Spencer Lecture at Oxford on this subject under the title of *The Values of Science to Humanity*; the text of this was printed and put on sale.

At the end of the war it became possible for the Society to circumvent the hostility of editors by beginning to publish its own articles. This was the origin of the series of *Occasional Pamphlets* of the Society, of which thirteen have now appeared. These were circulated free of charge to members and to the editors of certain journals, and were offered for sale to the public. The Society also began to communicate privately with its members by issuing a series of *Bulletins*, which were not available to the general public; of these, twelve have now been distributed.

Although the Society's publications were met at first with hostility and ridicule, yet they soon began to make their effect felt. From 1931 till 1938, Marxist writers had been able to publish whatever they liked about science, without danger of their remarks being challenged. The Society now sought, so far as possible, to answer all their assertions with quietly stated, carefully reasoned arguments.

VII

After the end of the war, the cause of freedom in science was greatly helped by the gradual public revul-

sion against communism, in Great Britain and many other countries. The propagandists for Marxist ideas found the ground cut away beneath their feet, and many of them switched over to anti-totalitarian propaganda with very little loss of time. The Society for Freedom in Science found the prevailing trend of opinion no longer in opposition to its tenets, but in agreement with them. At the meeting of the British Association's Division for the Social and International Relations of Science held in London in December 1945, the Society's views, as put forward in addresses by Prof. Polanyi, Prof. Tansley, and Dr. Baker, went almost unchallenged. In 1946 *Nature* published a long article on *The Course of the Controversy on Freedom in Science*, by Dr. Baker and Prof. Tansley.

VIII

Meanwhile, happenings in the U.S.S.R. were beginning to demonstrate vividly that central control results in the debasement of science. A strange orthodoxy began to be imposed on Soviet scientists, who found that they were required to make their findings conform to the ideas of particular authorities approved by the political leaders. The latter were naturally unable to form sound judgements on scientific matters, for it is only in a free society, with autonomy of science, that the best scientists will tend automatically to rise to the top. Schemers and wire-pullers have the advantage in a totalitarian regime, and gain the ear of the men who are in control.

The politicians were misled on the subject of genetics, and lent their aid to those whose object was to eradicate this branch of science in the U.S.S.R. The first blow was delivered by Lysenko and his associates at a conference held in 1939. This conference was reported in *Nature* (Vol. 148, p. 739 (1941)), but the degraded nature of the proceedings was glossed over and readers were given no adequate picture of what had occurred. In this country general attention was

diverted from such happenings by the overpowering urgency of problems connected with the war. Prof. Polanyi and Dr. Baker, however, found the opportunity to study the verbatim reports of the conference, and made the facts known in their publications.

Later, another conference on genetics was held in the U.S.S.R., at which Lysenko's triumph was complete. The science of genetics was eliminated throughout the country. This second conference had a greater impact on the outside world, and some British scientists who had adopted a lenient attitude towards the effects of communism and had tended to ignore the dangers it entailed for the freedom of science, now began to denounce the Soviet regime.

The Lysenko affair, though it is the most familiar example of the decline of science caused by totalitarianism, is by no means unique, for the hierarchical system, which leaves the selection of men for all scientific posts ultimately in the hands of politicians, pervades Soviet science. Events in the field of wave-mechanics, for example, have been similar to those in genetics, though less extreme.

IX

As the public turned its face ever more resolutely against communism, and even scientists who had been propagandists for the U.S.S.R. began at last to realize the true state of science in that country, it became doubtful whether it was necessary to maintain the Society in being. The propaganda for the totalitarian outlook on science appeared to have dried up almost completely. It was probably a feeling that the Society's work was done that caused quite a number of members to lose interest and drift away, and indeed the Society has less than half as many members as it had in the years when freedom in science was most powerfully menaced.

The enemies of freedom, however, are always on the alert and ready to become active again when its defenders appear to have relaxed. That is the reason

why the Committee maintained the existence of the Society. Its decision to do so was strikingly vindicated when the propaganda began for the central control of scientific publication. A conference on this subject was organized by the Royal Society in 1948. Shortly before it took place, the Society for Freedom in Science published in *Nature* a detailed criticism of the suggestion that scientific publication should be centrally controlled. On the day on which the conference opened (21st June) a letter on the subject from Prof. Tansley and Dr. Baker was published in *The Times*; this letter was commented upon favourably in a leading article on the same day. Members of the Society attended the conference. The proposal to control publication centrally met with so little support that it was withdrawn.

This incident illustrates one of the important functions of the Society—namely, to be always ready to put forward the liberal view whenever the suggestion is made that totalitarian ideas should be introduced into any department of science. The Society serves, however, an even more important function. Almost nothing was written on the necessity for freedom in scientific research or on the value of pure science before 1939. An immense field awaits cultivation. In particular, it is necessary to analyse in detail the reason why those who support freedom in science nearly always value pure science highly, and *vice versa* (see the Society's *Occasional Pamphlet* No. 12); much must also be done to cultivate the idea of the value of science as an end in itself, and to instil this idea into the minds of young scientists. It is hoped that the Society will be able to achieve these ends by continuing to publish its *Occasional Pamphlets*.

The *Congrès internationale pour la Liberté de la Culture* has recently begun to interest itself in scientific freedom, and informal contact has been established between the *Congrès* and the Society for Freedom in Science. It is hoped to maintain and strengthen this contact.

X

Membership of the Society is open to established scientists who are willing to sign their assent to the five propositions printed at the beginning of this pamphlet. A small number of distinguished philosophers, historians, and economists have also joined the Society.

The annual subscription is 10/- or \$1.50, payable on 1st January. There is no entrance fee. Those who live in countries from which the export of money is illegal are exempt from the payment of the subscription. Payment may be made in any way that is found convenient by members (cash, postal order, money-order, cheque, or banker's order). The Society provides a printed banker's order form for those who wish to use it; when signed, this should be sent to the Hon. Secretary of the Society.

Those who wish to join the Society should ask the Hon. Secretary to send an enrolment form. His name and address are as follows :

Dr. John R. Baker,
Dept. of Zoology,
University Museum,
Oxford,
England.

Members receive the Occasional Pamphlets and Bulletins of the Society free of charge.

The Society works with the utmost economy on an extremely small bank-balance. Expenditure is almost entirely on printing, note-paper, envelopes, postage, and the Assistant Secretary's salary. Committee members receive no payment for their expenses.

The Society's financial year ends on 30th September. Audited accounts with balance-sheet are issued to members annually. Every member is entitled to examine the Society's bank-book by previous arrangement with the Hon. Treasurer.

The number of members of the Society is at present as follows :—

| | |
|--|-----|
| In Great Britain | 120 |
| In the U.S.A. | 68 |
| In the British Commonwealth apart from Great Britain | 13 |
| Elsewhere | 23 |
| Total | 224 |

As was mentioned above, the Society was much larger when the danger to freedom in science was acute. It is particularly hoped that members will do whatever they can to obtain new members. The Society has no capital funds and is entirely dependent on donations and subscriptions. Its ability to pursue its ends by publication of the *Occasional Pamphlets* is controlled by the amount of money in the Bank.

XI

Apart from the requirements that no one shall become a member until he or she has signed his or her agreement to the five propositions, and that every member shall pay a subscription of 10/- or \$1.50 each year, the Society has no rules. It works very informally. The Committee would be prepared to resign and submit itself for re-election at any time if any considerable number of members should desire this ; but no wish to change the present Committee has yet been expressed.

All members of the Committee are British, except Prof. P. W. Bridgman. This is obviously unfortunate in an international society ; yet the Committee believes that an international governing body would be unworkable, because no proper discussion could ever take place, and quick decisions could never be made. The ideal arrangement would be to have separate committees in different countries, loosely linked with one another. It is earnestly hoped that a committee may be set up in the U.S.A., where so many of the Society's members live.

The present Committee is always anxious to receive the suggestions and constructive criticisms of members of the Society.

Copies of this pamphlet, for distribution among possible new members, may be obtained free of charge from the Hon. Secretary.

The following papers and books were published by members of the Society up to and including 1945, when the *Occasional Pamphlets* of the Society began to appear.

- 1939 Baker, J. R. *Counterblast to Bernalism*. New Statesman and Nation, 29th July, 1939, p. 174.
- 1939 Polanyi, M. *Rights and duties of science*. Manchester School of Economic and Social Studies, Oct. 1939, p. 175.
- 1942 Tansley, A. G. *The values of science to humanity*. (Herbert Spencer Lecture, 1942.) Allen and Unwin. 1/6.
- 1942 Baker, J. R. *The scientist and the community*. Electronic Engineering, 15, No. 175.
- 1942 Baker, J. R. *The scientific life*. Allen and Unwin, London. 7/6. Also published by Macmillan, New York.
- 1943 Bridgman, P. W. *Science, and its changing social environment*. Science, 97, p. 147.
- 1943 Marshall, R. C. *Astronomy in the service of culture*. Popular Astronomy, 51, p. 1.
- 1943 Polanyi, M. *The autonomy of science*. Memoirs and Proceedings of the Manchester Literary and Philosophical Society, 85, p. 19.
- 1943 Trueman, A. E. *Science and the future*. The British Way Pamphlets, No. 7. Craig and Wilson, Glasgow. 1/-.
- 1944 Polanyi, M. *Science—its reality and freedom*. The Nineteenth Century and After, 135, p. 78.
- 1945 Baker, J. R. *Science and the planned state*. Allen and Unwin, London. 7/6. (American, French, German, and Portuguese editions have since been published).

OCCASIONAL PAMPHLETS OF THE SOCIETY FOR
FREEDOM IN SCIENCE

- 1945 No. 1. *Is the progress of science controlled by the material wants of man?* By F. Sherwood Taylor. 1/6.
- 1945 No. 2. *Rights and duties of science.* By M. Polanyi. 1/9.
- 1945 No. 3. *Free science.* By Warren Weaver. 4d.
- 1946 No. 4. *The planning of science.* By M. Polanyi. 1/6.
- 1946 No. 5. *The future of science and technology.* By N. S. Hubbard. 1/6.
- 1947 No. 6. *The foundations of academic freedom.* By M. Polanyi. 1/6.
- 1948 No. 7. *Science pure et science appliquée, à la lumière de l'histoire des sciences.* By J. Pelseneer. 1/-.
- 1948 No. 8. *Soviet science.* (From *Pravda* [translated].) (No charge.)
- 1949 No. 9. *Papers on the Soviet genetics controversy.* 1/3.
- 1950 No. 10. *More glimpses of Soviet science.* 1/3.
- 1951 No. 11. *Speeches made at the dinner held to celebrate the tenth anniversary of the foundation of the Society.* By G. P. Thomson and H. H. Dale. 1/-.
- 1952 No. 12. *The psychological connexion of two basic principles of the Society for Freedom in Science.* By A. G. Tansley. 6d.
- 1952 No. 13. *Science in a satellite state of the Soviet Union.* (From Czechoslovak News Agency Bulletins [translated].) 1/3.

Copies of the Society's Occasional Pamphlets are obtainable from the Secretary, Society for Freedom in Science, Dept. of Zoology, University Museum, Oxford, at the prices shown in the list above (which include the cost of postage).