$l \cos\alpha = h$, where h is the vertical distance between the suspension point of the pendulum and its center of gravity. This results in

$$(2)\quad g = h\omega^2 = 4\pi^2 n^2 h$$

All that is necessary to perform the experiment is a motor with adjustable speed with the turning axis in vertical position. From the axis a little weight is suspended by a string. Furthermore, a revolution counter has to be attached to the axis. The speed of the motor is adjusted so that the weight swings in a predetermined height h, which can be observed through a telescope, and which is kept constant. Then only the number of revolutions has to be determined over a given period of time. Even with a rather crude set-up reasonable accuracy is readily attainable. If a kathetometer is used for the height determination and a revolution count made over a longer period of time a rather good approximation of g may be obtained.

The method can be refined by controlling the height of the weight and the speed of the motor by a photoelectric cell and by placing the arrangement in a vacuum.

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FOREIGN JOURNALS IN THE U.S.S.R.

IN a note in your issue of December 6, 1935, I compared the numbers of three British journals going to the U.S.A. and the U.S.S.R., respectively. In spite of the reiterated claim that scientific persons are treated more liberally in the U.S.S.R. than in any other country, and that the Soviet Union leads the world in its expenditure on and attachment to science, it appeared that in the United States *government and private effort together* obtained nine times as many copies of three important foreign scientific journals as in the Soviet Union.

It is possible that this comment did some good, for in the meantime the ratio has fallen from 9 to 4. Improvement is still necessary, for science can not be prosecuted without knowledge of what other people are doing, and the Soviet Union should need at least as many foreign journals as the U.S.A., since personal contact of its workers with foreign scientists is impossible. If the ratio (purchases by U.S.S.R.)/(purchases by U.S.A.) rises uniformly with time, it will become unity in about 1956. By then also it may be possible for scientific research workers in the U.S.S.R. to visit their colleagues in other countries. At present apparently it is not possible, for in spite of the evident attachment of the Soviet Union to physiology—not one physiologist was permitted to attend the International Congress of Physiologists last summer, nor even to answer the invitation.

Table 1, however, gives one hope of better things:

TABLE 1

	U.S.S.R.	U.S.A.	Ratio: per cent.
November, 1935			
Journal of Physiology	27	241	11.2
Journal of Experimental Biology	7	130	5.4
Biochemical Journal	47	374	12.6
Total	**81**	**745**	**11.9**
February, 1939			
Journal of Physiology	52	268	19.4
Journal of Experimental Biology	27	136	19.9
Biochemical Journal	126	390	32.3
Proceedings of the Royal Society A	25	191	13.1
Proceedings of the Royal Society B	15	146	10.3
Total	**245**	**1,131**	**21.6**

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THE MANIFESTO BY A PHYSICIST

NO one can read Professor Bridgman's "Manifesto by a Physicist" in the February 24 issue of SCIENCE without being profoundly impressed by the sincerity and high purpose of the author. Nor will any one doubt that his decision to close his laboratory to citizens of totalitarian states was taken "only after the gravest consideration."

One hesitates to call in question the carefully considered action of one of the most distinguished ornaments of American science, a man internationally known not only for his contributions to physics but also for his writings on the philosophy of science. Nevertheless, I venture to express the hope that few scientists in America and other democratic countries will follow Professor Bridgman's lead. I do this because of serious doubts respecting the efficacy of the procedure, its propriety, its justice and its wisdom.

It is difficult to see how such demonstration of hostility to the totalitarian conception of the state and the place of science in the state can be effective of great good. The detestation of democratic peoples for totalitarian ideas has long been proclaimed from the housetop. To express it in the laboratory can not add greatly to the weight of public opinion marshalled against the totalitarian régimes. Humiliation of visiting scientists, especially when it is visited upon the innocent as well as the guilty, must breed resentment against the behavior of scientists in the democracies.

Would not envy of them be more productive of action in the direction we wish? The scientist from Germany, Italy, Russia or Japan who visits our laboratories and observes the freedom in which we work can not but compare our liberty of action with the strait-jacket into which his government has put him, his colleagues and his students. Will not such visitor return to his land a more effective missionary for human liberty than one who has encountered only humiliating rebuffs?

The propriety of excluding visitors from scientific laboratories and other spheres of scientific activity, solely on the ground of citizenship in a totalitarian