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Science and the Public.

THE occasion for another article on a familiar sub-
ject is the Prime Minister's inaugural address
to the University College of Wales, Aberystwyth,
on the contributions of science and statesmanship
to the problems of civilisation. Mr. Stanley Baldwin
makes no claim to the title of 'man of science.'
One hopes that he possesses what in political
circles are known as the 'best brains.' If he does,
he would be the last to proclaim the fact. But he
does possess in a high degree that Greek quality
which Matthew Arnold translated as "sweetness and
light," and that Roman virtue extolled by the dying
Antoninus Pius, *aequanimitas*. Apart from his
official position, anything he says on the relations
of science to the public will be heard with respect.

Learning, Mr. Baldwin told the Aberystwyth
students, is less aggressive than it was fifty years ago,
because scientific men realise more the limitation of
their own work. The world of knowledge, like a
particle of radium, is in a state of rapid dissolution.
Mr. Baldwin admits that with his "slow working
mind" he no sooner begins to understand an accepted
explanation than it is obsolete. This fills him with
discouragement. His mind is not nourished by the
débris of discredited theories, which is spoon-fed
to the public. There is no finality. "We cannot
catch up with knowledge," Mr. Baldwin says. Life
is like a greyhound race, without a dog's chance of
catching the electric hare, running in a groove which
we call "the laws of science," and controlled by
another intelligence, remote, inscrutable.

When Mr. Baldwin turns from knowledge to those
possessing knowledge, what does he find? Experts
differ. He goes to economists for advice on safe-
guarding and finds that no two agree. If he seeks
advice on the gold standard, the experts reply with
different voices. Generalisations or ghostly ab-
stractions are offered to him instead of practical
advice. But, as he says, politicians have to deal with
men, swayed by good or bad passions, by ignorance,
and ignorance played upon, not with figments of
the imagination such as "the economic man."

This is a well-worn theme on which happy
warriors have contended in innumerable college
common rooms and other places where they argue.
Happily, as George Eliot observed, the blessed work
of helping the world forward does not wait to be
done by perfect men—or by perfect scientific or
economic theories. Men of science will agree with
the Prime Minister that the methods of the physical
laboratory are not the methods to be applied in
dealing with human nature. But they ask—and

this Mr. Baldwin seems disposed to concede—for “some preparation of the human mind,” for the new world which science is creating, not so much a concrete knowledge of science as a scientific outlook, a scientific habit of thought, or, at the worst, a conviction that there is such a subject, like the Eton boy’s conviction about Latin.

On the day following Mr. Baldwin’s address, Mr. J. B. S. Haldane lectured to the Fabian Society on “Science in Western Civilisation,” his thesis being that western civilisation is based on applied science and the future depends on how science is applied to human life. At present, the policy of most States is framed by politicians, carried out by civil servants and interpreted by journalists, all equally ignorant of science. Here is a counter-indictment by a distinguished man of science to the Prime Minister’s charges. Mr. Haldane makes no high demands. He would be satisfied if the Cabinet contained one member with a knowledge of science equivalent to a second class in the Natural Science Tripos, Part I, at Cambridge! Mr. Haldane gave some examples of official ignorance of science during the War. Could not the Prime Minister, without excluding from our civil departments the fine flower of the “grand old fortifying classical curriculum,” take steps to ensure that every Government office contains men of scientific training and attainment?

Mr. Baldwin, with curious prescience, observed in his address that professors of biology apparently think they are the elect of the earth. Not less than 50,000 original contributions on that subject are published every year, he said. Biology is an entrancing subject and Mr. Haldane is doing a good service, “one stroke of faithful work,” in emerging from his laboratory and discontinuing for a space his vivisection experiments—on himself—in order to make suggestions on scientific lines for curing the world’s evils. Incidentally he gave an illustration in support of the Prime Minister’s argument that men of science are not always in agreement among themselves. Eugenists, after some years of discussion, were able to convince the Government that it was wise to promote “good births” by income tax adjustments. Successive Chancellors of the Exchequer, including Mr. Winston Churchill, have endorsed the principle. But on this question Mr. Haldane draws opposite conclusions to Major Darwin and Dean Inge. If the restriction of families is due to a desire on the part of the parents to leave their children a modest competence and to ensure their efficient education, why not, he asks, abolish hereditary wealth and provide first-rate schools for all children? That suggestion, addressed

to an audience of socialists, may have been a sop for Cerberus. We shall not expect Mr. Haldane to perform an experiment on himself to establish this thesis, in a university the life-blood of which is provided by hereditary wealth. Mr. Haldane’s main argument remains—that if western civilisation is to survive, the ruling class must be scientifically educated. The election of Mr. Hoover as president of the United States, calling to this high office for the first time a man of scientific training and outlook, is a world-portent more significant, perhaps, than the Russian large-scale experiment in scientific education for which Mr. Haldane shows some predilection.

One final observation. Would it not be possible to encourage a more active appreciation on the part of the public of the benefits which science is daily conferring on the community—in the reduction of labour, in the cure of diseases, in transportation, and a hundred other aspects of human life? Consider broadcasting, for example. The British Broadcasting Corporation, by a broadcast appeal, could secure within a few hours sufficient funds for some worthy memorial, expressing the people’s gratitude for the lives and labours of those men of science who have made broadcasting possible—Faraday, Clerk Maxwell, Hughes, Marconi, Lodge, Fleming, and others. The Prime Minister said that he often felt that there is a real danger of the abundance of new knowledge impeding progress, that the apparatus accumulated by the scholar will be so great that he will not be able to move. Men of science will not endorse that view. Science is the golden girdle binding the world together. With every increase of the world’s gold, as Sir William Jenner said, the metal loses something of its value; but every addition to the store of scientific truth adds to its value, serving as a stepping stone to further discoveries.

Who loves not knowledge? Who shall rail
Against her beauty? Who shall fix
Her pillars?

T. LL. H.

Fossils and Stratigraphy.

Stratigraphical Palaeontology: a Manual for Students and Field Geologists. By Dr. E. Neaverson. Pp. xiii + 525. (London: Macmillan and Co., Ltd., 1928.) 18s. net.

DURING the past thirty years many deep borings have been carried out in Great Britain. Some of these have been put down to tap deep-seated water-bearing formations; others have been made in search of hidden coalfields, particularly in the east and south-east of England. Since the