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Science and Spiritualism.

THE recent correspondence in our columns on the attitude of men of science towards psychical research—particularly that branch of it which is usually called the 'physical phenomena of spiritualism'—has made it clear that the divergence between the two main views is as great as ever and shows no sign of compromise or conciliation. No useful scientific purpose would be served, therefore, by the publication of further letters on the subject.

The conservatism of official science in these matters is not unnatural. The conflict between the determination to accept only that which is based on irrefragable evidence, and that which relies on 'authority' and tradition, is as old as science itself. This conflict is as stern now as it ever was, and certain elements have lately arisen which enjoin a redoubled vigilance. The War gave a great impetus to the shadier forms of spiritualist activity and incidentally endowed unscrupulous mediums with large material resources. It is not surprising that these resources have encouraged the founding of 'psychic colleges' with resounding titles, and given a spurious air of scientific authority to the ordinary round of mediumistic pursuits. The capture of the citadel of official science would remove the last obstacle to the domination of public affairs by the new cult.

The distinction between spiritualism and psychical research is a somewhat artificial one. Spiritualism was the inspiring and driving force which founded the Society for Psychical Research in 1882. The S.P.R. founders were largely the Fabians of spiritualism. Their object was to sift the physical and mental phenomena of spiritualism and to sort out those to which they could give their adherence without loss of self-respect or scientific standing. The results of the labours of this Society have been published in thirty-six stately volumes, covering such varying subjects as hallucinations, telepathy, levitations, duplex personality, and haunted houses.

The late Sir William Crookes devoted four years to spiritualistic investigations (from 1870 until 1874) and announced the most amazing results. He then closed that chapter for the rest of his life, for reasons which, owing to the deliberate destruction of the necessary documents, it is now impossible to gauge. The forty-six years' activity of the S.P.R. has failed to duplicate Crookes's phenomena, or indeed to shed any light on them at all. With the doubtful exception of some sittings with Eusapia Paladino in 1909, and a few recent experiments not yet concluded, the evidence, for example, for telekinesis ('table-turning') and 'teleplastic' (or 'ectoplastic') structures has been entirely negative.

Nor can the evidence accumulated elsewhere be said to be more convincing. The work mostly quoted in favour of the existence of 'teleplasm' is Dr. von Schrenck-Notzing's "Materialisationsphänomene," which gives several hundred photographs of this mysterious substance. This work was of sufficient importance to lead to the study of its author's medium by the S.P.R. and by a Committee of the University of Paris. The official reports of both these bodies pronounced the phenomena observed to be quite inconclusive. Another attempt made by an academic body, this time the University of Vienna, to corroborate such phenomena, led last year to an equally pronounced failure. Thus Crookes's failure to convince the Royal Society may be said to have been the precursor of a consistent series of similar failures.

The tragic case of the late Dr. W. J. Crawford, of Belfast, is instructive. Here was a university lecturer of some distinction whose leaning towards mysticism made him an easy victim of a family of artisans with alleged mediumistic faculties. He devoted four years to their examination and endeavoured to duplicate and surpass the records of Crookes and Schrenck-Notzing. The 'invisible operators' who ruled the procedure led him on step by step until his records became the very travesty of scientific method, and gross imposition was presented in terms of his own psycho-physical guesses and speculations. When his career ended in suicide and an attempt was made to repeat his results, the repetition, which duly occurred, only served to reveal the *modus operandi* of the 'circle,' which was anything but spiritual. Such a *dénouement* is not, of course, unknown in purely physical science. Blondlot's *N*-rays were the subject of some fifty scientific papers, and his 'discovery' was recognised by the award of a substantial prize by the Paris Academy of Sciences. It is only natural that the caution wisely displayed by many physicists with regard to *N*-rays should be doubled and trebled when certain phenomena long discredited are presented in a new guise even on apparently unimpeachable authority.

Sir William Crookes in 1874 walked about in a well-lighted room with what he believed to be a 'spirit' on his arm, a 'spirit' resembling a girl of eighteen. No such amazing privilege has been vouchsafed to any man of scientific eminence since then. The phenomena obtained by scientifically trained observers have been poor in comparison with that high-water mark. This may be due to their 'unsympathetic' attitude, or it may be due to a wider knowledge of the chances of error and the means of deception. Investigators in search of ectoplasm have to be content with what looks like skin-bags or lengths of chiffon. As the control becomes stricter the results become poorer. When the control becomes rigid the phenomena cease altogether. That is the general rule, and it admits of only one interpretation.

The demands made upon the scientific investigator are nowhere more severe than in the cases of 'spirit photography' and the 'direct voice.' As the spirit 'extras' are not visible to the ordinary observer, we must suppose that they do not reflect ordinary light and are to that extent immaterial. Spiritualists usually meet this argument by saying that the effect on the photographic plate is not produced by light of any known wave-length but is a direct action on the plate itself. We must, therefore, assume that the invisible or disembodied artist can draw a likeness of a deceased friend of the sitter on the plate in such a way as to produce a correct negative. The difficulty of this feat is greatly increased if we remember that clairvoyants claim to see these spirit friends hovering about the sitters in the very attitudes shown on the photographs. Rather than face the innumerable difficulties in the way of a consistent theory conforming to the spiritualist view, most investigators will prefer to regard all so-called spirit photographs as examples of the almost numberless methods of deception which may be, and have been, practised in this most elusive department of spiritualist activities.

In the case of the 'direct voice,' we are confronted with even more formidable difficulties. There is nothing more 'spiritual' or less 'material' about a voice than there is about a brick wall, though the unscientific person may think otherwise. Where exactly does the material nature or structure of the direct voice begin? Do the spirits produce the necessary air waves direct at some focus in the air? One spiritualist view often met with is that the 'spirits' materialise a larynx and sufficient in the way of lungs and mouth cavities to produce the sounds heard. This does not make the matter any clearer. It is much easier to assume deception, more especially as fraud in this case is easy and 'convincing' and control extremely difficult, owing to the lack of orientation shown by most human ears in the dark. Here again the *onus probandi* must weigh heavily on those who claim that there is positive evidence.

The difficulties placed in the path of the observer all tend to make control more difficult and deception easier. Modern mediums work in total darkness or the dimmest of red light. The observer is not allowed to prescribe conditions. So long ago as 1880, Mr. Stainton Moses, an eminent spiritualist, said: "In 99 cases out of 100, people do *not* get what they want or expect. Test after test, cunningly devised, on which the investigator has set his mind, is put aside, and another substituted." Mediums may, by the rules of

the game, fail as often as they like and substitute other tests of their own devising. The patience displayed by expert investigators during some of their test sittings is astonishing. Hour after hour will go by without anything happening. The medium will fall asleep and wake up again. When anything does happen, if only the production of a rubber film (or something resembling it) from the mouth of the medium, it is eagerly scrutinised and carefully recorded.

Nobody can complain of unwillingness on the part of scientific men to investigate any phenomena offering a chance of extending the boundaries of knowledge, and the rewards, both material and social, of any such extension are very great. But after half a century of growing disappointment with spiritualistic phenomena, the number of qualified volunteers naturally shows signs of diminution. On the other hand, the flood of charlatans and impostors increases day by day. The 'new revelation' imported from the United States in 1852, with its combination of 'supernormal' telegraphy with Pentecostal gifts and Delphic oracles, has obtained almost undisputed sway over the mind of the masses thirsting for signs and wonders and determined at any price to believe.

It is for science to stem the tide of superstition and sift the true from the false. We are quite justified in assuming, with Sir Oliver Lodge, that man's future outlook on the universe will be very different from the orthodoxy of 1926. Such an evolution is bound to take place even on purely physical grounds, as indeed is shown by the prodigious changes in physical conceptions since 1895. But the fundamental principles of the scientific method will not change, and no set of phenomena which depends for its occurrence, not upon ascertainable laws, but upon the whim of invisible operators not amenable to a court of law, can appropriately form part of the subject matter of natural science.

In spite of all failures and discouragements, it is highly desirable that a competent body should exist for making out a *prima facie* case in favour of any alleged new phenomena of the class we are discussing. Such a body we have in the Society for Psychical Research, which has admirably fulfilled its functions in spite of material limitations such as do not hamper the wealthy 'colleges' of spiritualism. This Society has already done good work by its study of telepathy, hallucinations, and duplex personality. It includes people of the most diverse views, and can be relied upon to welcome any evidence of really unknown phenomena. It might possibly be associated usefully with the recently formed National Laboratory of Psychical Research, which is equipped with the means of studying psychical and related phenomena, but that should be easily arranged if desired. In the present state of this matter it is wisest and best for official science to wait for the recommendation of such a society before devoting any attention or labour to alleged 'supernormal' occurrences. The very use of the word 'supernormal' instead of 'abnormal' suggests that these occurrences belong to an order raised above the normal order of the universe (which would, of course, remove them from the province of science). That there may be such a supernormal order of things no philosopher can *a priori* deny, but the use of the word is too unpleasantly suggestive of a hieratic domination now happily overcome to be palatable to scientific men, and they will hesitate before installing the 'medium' in the high place from which, after much fighting and suffering, they have driven his ecclesiastical predecessor.

Education, Science and Mr. H. G. Wells.

The World of William Clissold: a Novel at a New Angle. By H. G. Wells. Vol. 1. Book the First: *The Frame of the Picture;* Book the Second: *The Story of the Clissolds—My Father and the Flow of Things.* Pp. 245. 7*s.* 6*d.* net. Vol. 2. Book the Third: *The Story of the Clissolds—Essence of Dickon;* Book the Fourth: *The Story of the Clissolds—Tangle of Desires.* Pp. 247-601. 7*s.* 6*d.* net. Vol. 3. Book the Fifth: *The Story of the Clissolds—The Next Phase;* Book the Sixth: *The Story of the Clissolds—Venus as Evening Star;* The Epilogue: Note by Sir Richard Clissold. Pp. 603-885. 7*s.* 6*d.* net. (London: Ernest Benn, Ltd., 1926.)

ALTHOUGH the critics have not been stirred by volumes 1 and 2 of William Clissold's achievement, there should be wigs on the green over volume 3, if it be not above them. Book V. is masterly in many ways—the less said of VI. the better, perhaps. No writer, other than the author, could have preferred the indictment he does against our public-school system and the ancient universities.

The attempt is made, in a preface, to justify the contention that the book is a novel: there is no novel in it: true it is, the story is told, ostensibly, by one William Clissold or through his brother Dickon but William is himself again, as he ever will be: from beginning to end, we are dealing with autobiography and early in the recital the writer gives himself away in saying—"Autobiography, provided that it be not too severely disciplined may be an almost inexhaustible occupation. Nothing is altogether irrelevant. Whatever interests me or has ever interested me is material." This, in a few clear words, is the book. It is a medical treatise—largely on social pathology.

The author is a photographer, working with a lens stopped down to a low aperture but of no great depth