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Rationalisation of Scientific Publication

THE social aspects of scientific research, and the view that men of science should take a much more prominent part in spreading a scientific outlook and approach to social and other general problems of the community, have been eloquently urged in recent months. Despite these new opportunities and the greater disposition to listen to the contribution he can offer in these matters, the scientific worker often remains his own worst enemy. The lack of progress, for example, with all attempts to rationalise the publication and abstracting of scientific literature, or towards effective co-operation between scientific societies, continues to demonstrate an inability of the scientific worker to set his own house in order, if indeed it does not expose him to the charge of fiddling while Rome burns. Conservatism can be preserved from inertia and ineptitude only by wise judgment and the assimilation, not the rejection, of new ideas.

There are, of course, conspicuous exceptions. The Oil and Colour Chemists' Association, for example, has recently appointed a research and development correspondent whose special task is to assist in the interpretation of the results of the latest research work in a form which is easily assimilated by the industry or by the public. This is a welcome sign of the recognition of the need for expositors or interpreters of science if industry and society are to utilise to any wide extent the scientific knowledge which is already available for them, apart altogether from the penetration of science into the new fields of social research. The laxity of scientific men generally in regard to the exposition of their results, the widespread use of jargon, the inability of many scientific workers to express themselves in concise and accurate English, are serious obstacles to the spread of scientific knowledge into the sphere of political action. Even in industry, startling examples are often encountered of the indifference of the research worker to the reporting of his results in terms intelligible either to other scientific workers or those responsible for management. The industrial worker often remains ignorant of, and amazingly indifferent to, the contrast between the meticulous accuracy of his experimental work and the careless and ambiguous manner in which he presents his results. He does not appear to realise that lack of care at this point may vitiate his work as effectively as inaccuracy in the laboratory.

In consequence of this neglect, besides the difficulty placed in the way of the assimilation of scientific investigations into industrial or social practice, the scientific worker adds to the burden of publications of which he is often the first to complain. Looseness of thought, and indifference to the accurate and correct use of words, are a prime cause of the redundancy noticeable in many scientific papers. Dr. H. Moore was undoubtedly justified in stressing this point in his presidential address last year to the Institute of Metals. There are few papers indeed which would not have gained both from a scientific and from a literary point of view by careful revision, the exclusion of all irrelevant matter and the choice of the simplest and fewest words to express the author's meaning. As Dr. Moore pointed out, a clear idea of what he is doing and why he is doing it is as essential to the research worker in writing his paper or report as it is in the conduct of his experiments. A command of terse pregnant English is a valuable possession to the writer of a scientific paper, and is worth much trouble and patience to acquire. One of the merits of abstracting work as carried out in the past under the Bureau of Chemical Abstracts and elsewhere has been the discipline it imposes on the abstractors in regard to conciseness and clarity. Apart from the knowledge the abstractor acquires of his science, it enforces precision of language which should be a great asset in the writing of papers in subsequent life, and should exemplify, to him at least, the way in which force and clarity are related to brevity.

Dr. Moore estimates that the length of a scientific paper might well be reduced by about twenty per cent in this way, with advantages both in clarity and in diminished printing and publishing costs; and this reasonable estimate is sufficiently large to indicate that the matter is one well worth close attention by scientific societies. One of the difficulties is, however, the lack of perspective which sometimes characterises scientific writers—a failure to see their topic in its true relation to the science as a whole, and a tendency to claim, for the normal or average, the fuller and more detailed treatment which should be the privilege of those few papers which describe some really outstanding achievement or advance.

This question of values cannot be evaded. It is essential in the investigator alike in planning, executing and describing his work. It is equally essential when we confront the large question of

the rational treatment of the mass of scientific literature to-day and the most efficient distribution of the burden. To its absence must be attributed the duplication of abstracting work which still persists, in regard to chemical literature, despite the example of co-operation afforded by the Society of Chemical Industry and the Chemical Society for nearly ten years. That it is difficult to avoid overlap between different fields such as chemistry, entomology, physiology, physics and engineering, etc., is obvious, though even here co-operation is less difficult than is imagined by the superficial. The duplication within any one field such as is provided by the abstracts of the Society of Public Analysts or the Society of Dyers and Colourists, to cite only two examples, which merely re-issue in varied form and at a later date the substance of abstracts provided for the whole science or profession by the Bureau of Chemical Abstracts, is surely remediable. Powerful arguments might be addressed in favour of the State contributing towards the cost of scientific publications, but support is unlikely to be given before men of science themselves eliminate the duplication of effort to which we have referred.

The waste and duplication are not confined, however, to abstracting publications. The same confusion of thought is to be found in regard to other types of publication as a result of the sectionalism and excessive specialisation in which such a profession as chemistry abounds. Each group pursues its own interests and special requirements without regard to those fundamental needs which must be served if its own specialisation is even to be possible. The net result is an intolerable burden on the parent and more comprehensive societies, such as the Chemical Society, which is appreciably enhanced by the marked reluctance of the younger members of the profession to support such societies by actual membership as compared with a couple of decades or so ago.

Chemists are probably neither better nor worse than other scientific workers in these matters, but if they and other men of science tend to lament rather too freely the burden which membership of numerous societies or the cost of publications places upon them, they should remember that the remedy is largely within their own hands. The setting of their own house in order would be a sure way of establishing the confidence of the community in the capacity of scientific workers for the wider fields of social service now opening before them.