

Encouraging the scholar

I have a modest suggestion to make—we should take steps to raise the scholarly art of writing review articles to somewhere nearer the status of an original research paper. Anyone who has written such an article knows how his own appreciation of the field is enhanced, so that he is likely to find new inspiration for his research; and when one reads a well-written review such as, for example, appears quite frequently in the *Reports on Progress in Physics*, and used to appear much more often than nowadays in the *Reviews of Modern Physics*, one can recapture something of the pleasure that pervaded one's youth. I remember student days spent in the University Library at Cambridge pottering among the shelves and dipping into one book after another, and the memory is of a quiet sort of joy that still returns with the smell of old books. And it is also there, even now, when I pick up a well-written review article, but is most notably absent when the latest research journal arrives on my desk.

But even if we take little account of aesthetic pleasure in our research lives, we should not neglect the value of the review as perhaps the only way of committing to posterity the knowledge and understanding that has been gathered with so much effort. For nowadays there is such pressure on a young scientist to make his reputation quickly that many a research field is abandoned as soon as the results begin to come more slowly and demand more painstaking and time-consuming effort. If we fail to consolidate what we know, and provide a critical guide to the literature, before moving on to other things, we lose much of what we have won, and condemn our successors to repeating the same mistakes as we made; we shall waste much of their time because we wish to save a little of ours.

Since the advantage is so obvious, even to our own community, surely we can try to enhance the prestige of scholarly work in physics to the point that it may even be possible to take on good graduate students for projects that are essentially expository and critical. This is something that an aging and experienced research worker might welcome, for he could pass on his intimate knowledge of a field and encourage his student to survey it with fresh eyes, picking holes in the evidence and attempting a just appraisal of the existing state of understanding. But I'm afraid this is an unrealistic ideal unless the student can hold his head up amidst the others who

have been taught to believe that any new thing, however shallow, that can get past the editor of a letters journal is worth more than a critical review which, far from adding to the pile of papers that the next worker must cite, actually relegates a great number to oblivion.

One way of creating prestige is to introduce rewards. Why don't we encourage the next philanthropist who wants to perpetuate his name to establish a fund for rewarding the authors of the best reviews—those which most effectively make recourse to the primary literature unnecessary. The reward should not be one gigantic prize that no one will think it worth aspiring to, but a whole lot of prizes of various sizes—2 or 3 rather large and 10 or 20 rather smaller. The value of, say, a single Nobel prize broken up this way, with the awards given at some public function like the annual meetings of the APS, would do more to encourage real learning than any other investment of this size that could be made. Perhaps the learned societies of several countries could act as sponsors or trustees, taking turns to choose the prizewinners and organize the presentation.

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