

that it will remain on best-seller lists for at least another 2 years. The amazing fact about all this is that *Not as a Stranger* is not a love story, not an adventure study, not a murder mystery, not a popular psychology, not a comedy, not even a heart-thrilling historical novel. It is a thick book of more than 1000 pages about science and some of the men and women who devote their lives to science. It is a book about medicine, biology, physiology, and chemistry; about research and teaching and studying; about general practitioners, specialists, laboratory technicians, nurses, biologists, chemists, and physicists. It is concerned with the extent to which science compels idealism to compromise with reality and with whether, in a universe of pain and pretense, of atoms and absurdity, of fear and folly, there can be any place for a rational faith. It is not a "summer-afternoon-in-a-hammock" kind of book. It is big, vital, and provocative, carefully and accurately written, and its great popularity is the best evidence of the high place of scientific thought and activity in the literate man's present world.

Only a few places below it on best-seller lists is a factual book entitled *The World of Albert Schweitzer*. More than 100,000 people have each paid \$5 to own this unusual collection of photographs and text about a most unusual man. He is not a young, handsome man, not a movie star, not a great sports figure; he is not the head of a nation, a titan in industry, or an eccentric multimillionaire. He is a man of science who is considered one of the greatest human beings of this century.

The Book-of-the-Month Club choices go monthly to more than a quarter of a million subscribers, thereby automatically insuring best-sellerdom to such choices. Its March 1955 selection is *Conquest of Man* by Paul Hermann, a German scholar. No novel, no informal, lightweight divertissement, this is a 455-page, \$6 account of early discovery and exploration across the world. It is a book of archeology; it is history; it is science. The board of the Book-of-the-Month chooses its titles with at least half an eye to pleasing its vast membership. The choice of a lengthy book on archeology is strong evidence, again, of the mounting interest in things scientific on the part of the general reader.

Laura Fermi's *Atoms in the Family*, a biography of her late distinguished husband, Enrico Fermi, was chosen for condensation in *Omnibook* (March 1955). This roughly more than doubles the number of people who have already read it. Mrs. Fermi's account of the scientific achievements of her late husband is not at all technical or abstruse. This, however, does not lessen the significance of the fact that a biography of a nuclear physicist is being read by as many people as read a very good novel.

The only reason, apparently, that more science books, factual or fictional, are not on best-seller lists is that few such books have, as yet, been written. From the sales figures of the few mentioned here and from remembrance of such other best sellers as *The Sea Around Us*, *Annapurna*, *The Silent World*, and the

like, it is obvious that books dealing with science or scientists or scientific data appeal not only to men of science themselves but to the general reader as well. The so-called "layman" is becoming more and more interested in such books. Writing them should prove not only challenging but rewarding to men of science. A genuine service would thus be rendered to a public eager to understand science and increasingly dependent upon that understanding almost for its very life.

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## Do Ye unto Others

*The editors of Science make wide use of referees, sending nearly every paper that is submitted to at least one expert, and sometimes to two or three, in the appropriate field. In the following letter, one reader has set down his suggestions as to how these referees can most helpfully perform the sometimes arduous and annoying but always important task of reviewing manuscripts—a task for which they cannot be publicly thanked, but one for which the editors are constantly grateful, and by which the readers are regularly benefited.*

Refereeing a paper is a job that will interrupt your interesting work, occupy your valuable time, and bring you little or no credit or thanks. You might even be enthusiastically condemned. Why, then, should you bother to do it? Or, why should you bother to do it well?

Selfishly, you should appreciate this unique opportunity to become acquainted with some of the current work several months before it is published. At least a small part of it may be directly stimulating and helpful to you in your own thinking. Also, you should realize that others will be asked to give their valuable time to your own papers. Besides, is it not pleasant to have someone imply that your opinion is worth having?

Unselfishly, you should recognize that here is a chance to render worth-while assistance to progress in your field of interest. You may be able to provide real and valuable help to the author—help from which everyone may eventually profit. You are certainly placed in a position where you can aid the editors in their arduous and relatively thankless task of making the publication of greatest possible value.

Refereeing a paper is not just a chore, however, and not just an opportunity. It carries with it also a serious responsibility. Remember that as referee you are actually in a position of public trust. Not only the editor and the author, but also the public, are counting on you for a fair, thoughtful, and competent evaluation of the paper. Here are some suggestions that may be helpful.

The first point in thoughtfulness is to be reasonably prompt. It is all right to procrastinate in your own work, if you can get away with it, but please do not hold up the progress of science and frustrate someone else by sitting on his paper needlessly long.

You may not feel competent to judge a certain paper at all. Then why not return it immediately to the editor and tell him so? Or, you may feel that your competence in this field is limited. Perhaps you could comment to the best of your ability and also explain to the editor honestly what your limitations are with respect to evaluating the paper. No one knows everything, no one could possibly know everything, and certainly no one should be ashamed to admit not knowing everything, even within a highly specialized field.

You may find that a competent evaluation would require more time than you are prepared to give. If so, mention this fact to the editor with a tentative report, or return the paper without comment, explaining that it would require an unreasonable amount of time for one in your situation. Perhaps you can help the editor by suggesting someone else who could do the job more easily and better.

You may not understand part of the work described or may think it in error. Be sure that you have read exactly what the author *said* and not what you *expected* him to say. The most lucid exposition possible could make no dent on a tin ear or a closed mind.

If you think the paper too long for its content, try to help the author by suggesting specifically what he might condense or omit. Do not just tell him to give more data, expand the explanations, and cut the length to one-fourth. The author wrote it in the way that seemed best to him; if he is asked to revise the paper he should be given suggestions.

If you enjoy a wide reputation as an expert in the field, be *especially* cautious in what you say. The editor will value your opinion highly, so *be sure it is worth a high value*.

If you disagree with the author, *be specific* and cite book, chapter, and verse. The editor may accept you as an expert, but the author does not even know your identity. Certainly he is entitled to know the basis of your stated disagreement.

Publication of a poor or inaccurate or invalid paper is to be avoided if only because it wastes valuable space. Obviously it does not bring favorable notice to a journal; it may embarrass the editors and ought to embarrass the author. Nevertheless, probably no serious harm is done, since the readers most interested in the subject are usually reasonably skeptical and competent to judge. Therefore, as referee, beware of recommending against publication, *unless* you have every reason to be positive that you are *right and* are prepared to present the author with complete justification for your recommendation.

Remember that if you are a human being, scientific or not, you may be prejudiced against new ideas. In fact, you can hardly have become an expert without acquiring prejudice. Resist this prejudice! By approving a paper for publication, you are not espousing it

—you are merely giving it an opportunity to be evaluated to the public. But by disapproving it for publication, you are assuming the far graver responsibility of depriving the public, without contest, of a fair chance to read and judge for itself. You become a self-appointed censor—are you positive you qualify? Certainly the repression of the truth would be a much more serious mistake than the publication of inaccuracies which can readily be checked.

Finally, if you can possibly find something good to say, please say it! Nonchemically speaking, a little sugar will help to neutralize a lot of vinegar.

In summary, when an editor sends you a paper to evaluate, imagine yourself in his position, forced to select critically from an overabundance of material, and write what he needs to know. *Then imagine yourself as author, and see how you would react to what you have written.* What better rule for referees than the Golden Rule?

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21 February 1955.

## Achieving Style in Writing

The following gem of original natural-history observation is a 10-year-old's essay, "A bird and a beast," quoted by Ernest Gowers in his book, *Plain Words*, which was prepared for the guidance of British civil servants whose duties include tasks of writing.

"The bird that I am going to write about is the owl. The owl cannot see at all by day and at night is as blind as a bat.

"I do not know much about the owl, so I will go to the beast which I am going to choose. It is the cow. The cow is a mammal. It has six sides—right, left, an upper and below. At the back it has a tail on which hangs a brush. With this it sends the flies away so that they do not fall into the milk.

"The head is for the purpose of growing horns and so that the mouth can be somewhere. The horns are to butt with and the mouth is to moo with. Under the cow hangs the milk. It is arranged for milking. When people milk, the milk comes and there is never an end to the supply. How the cow does it I have not realized, but it makes more and more. The cow has a fine sense of smell; one can smell it far away. This is the reason for the fresh air in the country.

"The man cow is called an ox. It is not a mammal. The cow does not eat much, but what it eats it eats twice, so that it gets enough. When it is hungry it moos, and when it says nothing it is because it is all full up with grass."

Gowers commented: "The writer had something to say and said it as clearly as he could, and so has unconsciously achieved style."