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?

R. T. SANDERSON

Department of Chemistry, State University of Iowa

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."