Symposium on Error Control in the Chemical Literature*

Introductory Remarks

KARL F. HEUMANN
Federation of American Societies for Experimental Biology,
9650 Rockville Pike, Bethesda, Maryland 20014

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This symposium grew out of a discussion on errors in the chemical literature initiated during a meeting of the Committee on Modern Methods of Handling Chemical Information, a part of the National Academy of Sciences–National Research Council. In a report to the Committee, Miss Winifred Sewell and I said:

> "The Subcommittee is concerned that errors occur in the chemical literature, that their economic consequences are incalculable, that they are not systematically corrected, and that there is no program in operation which will change this situation. New techniques of information handling intensify the problem by making detection and correction more difficult at the same time that they increase the potential for systematic correction."

After it was decided to organize the meeting reported here, an earlier symposium on errors in the medical literature was published (*1*) with a bibliography of 1000 references. By a fortunate circumstance Dr. Wagner, organizer of the earlier meeting, was present during the symposium in Pittsburgh and took part in the discussion.

Other than the extensive symposium on medical literature (*1*), remarkably little has been written concerning errors in the literature (*2*). My own interest in the subject was awakened 20 years ago when I began to use the Chemistry Department library at the University of Illinois. Some one had entered all the printed errata on the appropriate original pages; I was suprised at the frequency with which these occurred. Two points seem worth making about this experience: The errors I saw noted were only the ones brought to the editor's attention, and out of these, the ones he felt worth printing; the great majority of library collections have not bothered to do this job.

Even textbooks, perhaps the most carefully prepared of all books, are not free of serious errors. A long series of articles in the *Journal of Chemical Education* (*3*) has shown that these mistakes are passed from one author to another quite regularly, assisting what Stefansson called "the standardization of error" (*4*). There are people who feel that perfection is not necessarily best; Pareto said in commenting on Kepler: "Give me a fruitful error anytime, full of seeds, bursting with its own corrections. You can keep your sterile truth for yourself." And it is true that inconsistencies can give rise to usefulwork (*5*).

Anticipated future developments in machine handling of information on a large scale raise the problems of error in a new form. In the past, corrections to the literature could be made all through the literature cycle because people inspected data at various stages of their preparation, publication, and use. When machine use is the rule, all the correcting steps ought to come before machine storage, or the store of information will be degraded by its built-in errors.

More generally, it seems clear that any information activity ought to budget a certain portion of its time, manpower, and funds on error correction.

By means of this symposium it is hoped that ideas can be generated to attack this difficult, inherited problem.

LITERATURE CITED

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