

## A Think Tank for the Servants of Geoscience

E. R.W. Neale, Catherine E. Findlay et Maureen E. Dickson

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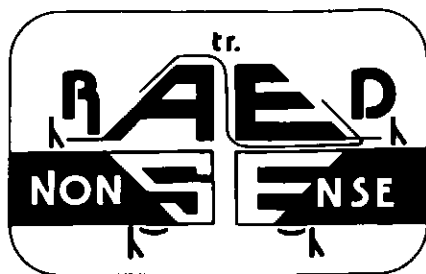
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## A Think Tank for the Servants of Geoscience

E. R. W. Neale and Catherine E. Findlay  
*Institute of Sedimentary and Petroleum Geology*  
*Geological Survey of Canada*  
 3303 – 33rd St. N.W.  
 Calgary, Alberta T2L 2A7

Maureen E. Dickson  
*Department of Geology*  
*McMaster University*  
 Hamilton, Ontario L8S 4M1

### The Annual Meeting of Earth Science Editors at Butte, 1978

Many of the downtrodden poor seek solace in fantasies – wherein they picture themselves making scientific small talk in the salons of the rich. So it is with editorial people, unappreciated servants of the geoscience masses, who dream of one day being invited into the heady intellectual milieu of a Penrose Conference, located in one of those secluded, luxurious spas which the scientific elite find so conducive, indeed absolutely necessary, to clear thinking. Earth science editors brought substance to their dreams this year by meeting at Fairmont Hotsprings on the outskirts of beautiful Butte. One hundred and fifteen of them floated around on their backs in the steaming, remedial waters, gazed up at Montana's famed Big Sky (better even than the planetarium back home in smoky Pittsburg or Hamilton!) and exchanged views on the paranoia of authors, the devious ways in which people became editors, the ultimate power of editors if you penetrate behind their veil of apologies and excuses, and the impending agony of microfiche.

### The Editor as Manager

*Fred Spilhaus* (JGR, Eos) got right to the heart of this subject when he stated that planning, organization and control are the three essentials of good management and someone connected with every journal (usually the editor) should be involved with these functions. We must have goals and the first of these is to determine whom we are serving. As almost all new knowledge in the earth sciences is processed through our publications and as it is of no value until archived and accessible, then our main duty is to the users of that knowledge. Unfortunately, some editors place financial matters or authors' egos ahead of users' needs. Next the Editor should plan his review system – what is it trying to accomplish, how can these aims best be achieved, how do we eliminate bias creeping into the system (he admitted that JGR had once had an anti- and later a pro-plate tectonic bias). Finally, the journal's editor/manager should address himself to such things as: page limitations for articles, measurement of the impact of articles, deciding the optimal number of subscribers, and adopting an acceptable limit to errors in proofreading and restricting proof cycles to meet that limit. He emphasized that every part of a journal's operation should be analyzed in terms of its goals and its demands of time, space and money. In many cases, the journal's editor is the only one capable of such analysis.

In the ensuing discussion, Spilhaus was able to tell us startling things about American Geophysical Union publications: e.g., the JGR (world's most cited geoscience journal) publishes few papers that are read by more than 50 people and many of them have already read the manuscript before it was published, also JGR editors overlook minor spelling errors and won't correct trivial errors in proof.

Other participants on this panel stayed on the fringes of the main topic but still made some interesting points. Thus *Art Meyerhoff* railed against the usual methods of selecting or electing editors which consisted of finding a willing big name in the game (who would enjoy seeing himself on another masthead) or just finding someone who wouldn't refuse the job. The upshot was that societies commonly ended up

with editors who were incompetent managers, incompetent judges of good scientific material and people who were unwilling to devote the necessary time to the job. What they needed were highly dedicated, competent people who had ample time and had nothing to gain or lose by either popular or unpopular decisions (i.e., rich or retired or both?).

### The Selection Process

This was the subject of formal presentations by representatives of both society and commercially sponsored journals and also by a government spokesman.

*The Free Enterprise System.* *Alex McBirney*, editor of Elsevier's Journal of Volcanology and Geothermal Research, spoke via a telephone proxy (his airline connections failed him) on the commercial journals. He stated that, as Editor, he had complete freedom in all matters of scientific selection. He had chosen his own board of associate editors and he reads each paper himself and sends a copy of it to one of these associates who might, in turn, consult with yet another expert. In a specialized quarterly such as his, he feels that a large group of first-rate associate editors ensures high quality and rapid turn-around which eliminates publication delays and hence attracts good papers. He had visited Elsevier headquarters in Holland in preparation for this meeting and was much impressed with the efficiency of a three-person staff who handled all publishing details of his own and 23 other earth science journals.

When asked why some of his sister journals had notoriously spotty standards and mastheads cluttered with names that were obviously no longer active in research, McBirney stated that the fault must lie with the Editor for the power was in his or her hands. McBirney left us with another message: whether we like it or not, our whole publication system is moving towards the Elsevier pattern – specialized journals catering to a select readership.

McBirney admitted, in reply to a question, that the weakness of a commercial journal was the lack of a mechanism to get rid of a poor Editor. As long as the enterprise was profitable (and as long as prices could be

raised this might be forever), the company had no incentive to discharge an editor.

*Society Brands.* Ward Neale, editor of the Canadian Journal of Earth Sciences, spoke for society-sponsored journals: his own experience was augmented by a simple questionnaire circulated to Canadian editors of both commercial and society-sponsored geoscience journals. He briefly described the CJES refereeing process he selects one referee and an appropriate associate editor selects another. The associates, who are rotated regularly, are active scientists representing most of the specialties of this general journal. They are consulted in cases of rejection, divergent reviews and unpleasant matters such as accusations of plagiarism, duplicate publication and so on. Referees have the option of remaining anonymous (less than 50% take advantage of it) and authors' protests usually lead to additional refereeing and/or consultations. Neale stated that most of the highly-cited journals he had contacted used somewhat similar refereeing procedures, following consciously or otherwise the systems outlined by DeBakey (1974) Those with lesser reputations, but including one top-rated, highly specialized journal, seemed to rely on a less organized review system that involved fewer members of the geoscience community and many more individual decisions from the Editor.

Special problems of society-sponsored journals were identified as: (a) Ill-informed interference in editorial policy and procedure by the executive and there was one Canadian case of a resignation because of this. A strong editor should be able to handle this type of situation; (b) Suspicion of bias directed towards a volunteer editor who normally himself had some research involvement. This could be handled by bending over backwards to illustrate objectivity; (c) Lack of time – an incurable disease that affects all part-time volunteers – only government editors escape.

The great advantage of a society-linked journal is the fact that at least part of its readership has a vested interest in the journal and an executive and mechanism (e.g., an editorial committee) to funnel complaints to the

Editor and to relieve him of his responsibility should he prove inept. Such checks on performance are usually lacking in both government and commercial editorial circles.

Ira Lutsey, AAPG publications manager, augmented Neale's account by describing his journal's refereeing procedures. He sends each manuscript on to one or more of the associate editors who are part of the AAPG review system. Manuscripts are then returned to the elected editor, who passes judgment and that judgment is less than one per cent accepted as is, 40 to 50 per cent accepted with revisions, 40 to 45 per cent rejected in their present form, and about 10 per cent rejected outright as wholly unsuitable.

Lutsey pointed out the economic advantages of a good peer review system: (a) subscriptions increase as quality increases; (b) when standards become known, weak articles are not submitted to clutter up the system; (c) manuscripts that have been subjected to rigorous refereeing cost less to process for publication.

*The Bureaucratic Approach.* Bob Davis, Chief of the USGS Office of Scientific Publications, talked on the selection process in government institutions. Chiefly his discussion centred on his own huge organization which publishes about 3700 maps and reports per annum – about 2350 in outside journals and the rest through its own publication series. He stated that under various Acts his organization was required to make all its data available to the public. In effect this is a carte blanche to publish everything but the Survey also interprets it as a mandate to publish its information in the best form possible. Most manuscripts have to survive a many-faceted selection process as approval to publish is required at various levels and rejection or return for major revision might occur at an early stage, before the report reaches editorial people of the Technical Report group. Reviews are chiefly in-house procedures and Davis defended this by stating that the USGS has an enormous staff and it is usually possible to find the required critical skills without going outside. In reply to a question concerning an author's right of appeal against a rejection or negative review, it was stated that he could

always take his case to senior officers up the line although it was very unlikely that a senior editor's final decision would be overruled. In some cases, to pacify an irate author with some justice to his cause, his work in whole or part might be placed on open file.

In the ensuing discussion, it was pointed out that, although internal reviews might suffice for a large organization such as USGS, they would be less than satisfactory for small state or provincial surveys which might have lone specialists on staff whose work could not be appraised adequately by colleagues. Several senior people from state surveys mentioned that they did seek appraisals outside but, when questioned, admitted that the author was commonly asked to name appropriate referees – which could make the system suspect. At least one provincial editorial person brought up the point that much government data are considered confidential until officially released to the public and, hence, the use of external reviewers would leave openings for breaches of security. In rebuttal to this, it was stated that any author who sends his bright new ideas to a journal runs the risk of having them plagiarized by referees but we seldom if ever hear of such breach of trust. Also, a journal editor would seldom if ever send a manuscript to be reviewed by a colleague of the author in the same institution, in order to avoid both bias and embarrassment. Surely editors and referees in some governmental agencies must think twice before rejecting or severely condemning the work of the person in the next office down the hall!

*In Conclusion.* The panelists' presentations and the discussions left these conclusions with us: editors of journals are very powerful people who are relatively free from extraneous influences in setting goals and standards. If the journal is weak, it is probably the fault of the editor: unfortunately if it is a commercially published journal there is no easy way to remove an unsatisfactory editor whereas societies usually have mechanisms to quickly rectify such a situation. Government editors may lack such power to seek excellence as they are constrained by their mandate, by internal policies and also, possibly, by their place in the hierarchy.

### New USGS "Suggestions to Authors"

Anne Christiansen of the USGS gave us a rundown of the various editions of this best seller since the first in 1888. The long-awaited 6th Edition is finally available and it has some advantages over previous editions: e.g., it devotes 26 pages to preparation of illustrations, usually the most expensive part of any publication and a rather neglected item in previous editions of this handbook. The 6th is organized to suit the needs of Survey editors with sections on how to react to reviews, how to write, requirements of specific types of Survey reports, etc. Apparently it is marred by numerous minor errors (who edits the editor's work?) and is far too long. Christiansen claims it will never replace the 5th Edition as a bible for geological authors. Her own favourite is the 4th Edition (1909) which was short, sharp and informative. If you own a copy, hold on to it as it improves with time!

Incidentally, on the subject of illustrations, there was an intriguing little handout by C.J. Newhouse and Fred Kunkel entitled *Techniques for Author Preparation of Printer's Copy of Coloured Maps and Other Illustrations* (available from them at USGS, Menlo Park). It is designed to suggest do-it-yourself techniques that will allow authors to prepare positive multi-coloured copy of maps that will be suitable for direct photographic colour separation and printing without extensive re-drafting. In each case, of course, authors and supervisors should weigh benefit/costs of higher aesthetic quality but greater time lags of professionally prepared products against speed of author-prepared product. Worth thinking about if your Survey's coloured illustrations take years to appear in print. Take a peak at USGS Prof. Paper 950 before writing for this pamphlet.

### Microfiche and Open Files

The USGS Microfiche and Open File Center is flourishing according to John Heller. In 1970, only 373 reports and maps were placed on open file whereas it is anticipated that over 1000 will be placed in this repository in 1978. The material placed on open file is quick and dirty copy – the idea is to get it out fast to the public. Actually in many cases it ends up as the only record because authors sometimes

don't get around to formal publication.

One problem until recently was difficulty of access to the user. Now, however, all items are advertised on the Survey's monthly list of publications and by writing to O.F. Services, USGS, Box 25425, Denver, the customer can have his copy on paper or microfiche by return of mail. Microfiche has built up to 10 per cent of total sales and demand for it is increasing – Heller claims it has finally achieved wide acceptance by individuals, companies and libraries.

One of the hang-ups of open file reports has been the rough state of some author-prepared copy. However, with sales and distribution booming, authorities are hoping to cajole or shame authors into preparing cleaner, neater, more reproducible manuscripts and maps.

### More on Microfiche (The GSA Story)

We had a report from Jean Thyfault on the GSA Bulletin's brave attempt to cope with the information explosion. Briefly, it is off to a very shaky start but the executive and the editorial board are unanimous that they will stay by the new approach and give it a fair try.

The new approach is a maximum of two printed pages per article in the Bulletin – the remainder of each paper to appear on microfiche. The idea was to cut costs incurred by the \$90.00 per page Bulletin; to eliminate a large backlog and consequent publication delays; and to avoid page restrictions and hence get more information to the reading public (via fiche).

The new scheme was well advertised to authors and readers and GSA expected an enthusiastic response. Instead, in the first half of 1978, only 3 articles had been processed instead of the usual 180! Meanwhile, submissions to GSA's quickie publication 'Geology' have increased enormously – authors seem to prefer 5 pages in Geology without documentation to two pages in the Bulletin with full documentation on fiche.

Thyfault and the newly appointed editor-in-chief, Verne Swanson, stated that they were confident that when authors note that only the best quality work is coming out in the Bulletin they will speedily return to the GSA fold. GSA does seem to have the right answer to the proliferation of papers, one

that we shall eventually all have to adopt. We must admire a brave, firm stand by a world leader.

Meanwhile buzzards, such as JGR and CJES, hover around to seize the crumbs that formerly went into the GSA bread.

### Miscellany

*Industrial Editing.* There are increasing opportunities for literate earth scientists and editorial people with an earth science bent to work in industry. Janet Cluff, works with a fairly large geotechnical firm and finds demand increasing for her type of work. Instead of merely attempting to change manuscripts into readable form, she now visits sites and makes suggestions for the preparation of reports and becomes totally involved in figures, photos, text paper quality and final format. She also helps engineers and scientists with manuscripts which they submit to outside journals. Her input to some reports is so large that she sometimes ends up as co-author. Demands have increased so much that she now has to hire freelance editors to help out on editing and proofreading and may have to build up a full-time editorial staff.

Mary Horne, a freelance geoscience editor, stated that most of her assignments come from direct contacts or referrals. Apparently many large companies farm out their technical editing and illustrations to advertising companies. An energetic geoscientist/editor can profitably undercut advertising rates and provide a much better service. Something to remember when you are next trying to bully your geology students into taking an extra English course!

*Technology Transfer.* Jay Fussell of the Nebraska Survey gave some interesting pointers on this business of taking scientific knowledge generated for a specific purpose in a specific environment and transferring it to another environment where it can work. As he pointed out, publication of a scientific paper is considered the end result of a research project but it is only the beginning of the transfer process as most potential users of the information don't know of its existence and probably couldn't understand its significance in its first published form. This is why it

takes so long, for example, for geological ideas to filter into agricultural or engineering practice as a potential user searches for the knowledge he needs.

Fussell stated that technology should be pushed into the open, new discoveries should search out users. His Survey has done all the expectable things to hasten the transfer process, e.g., re-writing geological reports so that their significance will be apparent to other specialists and announcing discoveries regularly through the media. In addition, they phone potential users in several fields and, if they are interested, arrange personal contacts with the researchers.

*How to Rise Through the Editorial Ranks (Start at the Top).* There was desultory informal chat on this subject as one might expect at such a meeting. It seems that technical editors work slowly up the line, starting as copy editors with or without a science background. Their advancement is often curtailed, particularly in small state and provincial surveys where there is no particular room for them at the top. A few eventually flourish with large scientific societies and might eventually become publication managers. In contrast, selection editors and managing editors are geoscientists who are elected or appointed to these top posts, sometimes with a great deal of care, sometimes in a mood of desperation with little or no regard to their abilities. In government agencies, the editorship can be the ultimate reward for an undistinguished scientific career or a lateral promotion for a person who has opted or been pushed out of the regular chain of command. Anyway, it was generally agreed that if you wanted to end up at the very pinnacle, there was no need to learn anything about editing while en route.

#### Some Carping Comments

- Although meticulous about illustrations and format of publications, editors are at least as callous as the average geoscientist in regard to illustrating their own lectures: a couple of talks relied heavily on the usual unreadable tables and diagrams.

- Avant garde editors are pushing for shorter, sharper reports and papers that get the messages across neatly and succinctly in the first few pages. Yet this meeting was plagued by long-winded introductions that harked back to the author's high school and college careers and usually neglected to mention just what qualified him to speak on his chosen subject.

#### Don't Miss The Next One

- Anyone connected with geoscience editing should make an effort to join this Association and attend the next annual meeting (contact John Heller, U.S.G.S., Denver for details). Where else can you mingle with a small group of like-minded people and chat over your problems with Robert Bates (the Geological Column), Bill Freeman (from the Press of the same name) or William Kautman (another great innovator in science publishing)?

- There were a dozen Canadians at this meeting — from Halifax, Victoria and in between. The largest representation ever — possibly because the Association had a Canadian President, Stu Jenness of NRC?

- The meeting is unfortunately not always in a splendid exotic setting such as it was this year. Next September it is scheduled for torrid Tulsa and in 1980 it goes to foggy Halifax where Mike Latremouille of the Bedford Institute will be in command.

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