

uses what sorts of analyses (4). More pointedly, we might attempt to evaluate the return on investment from such studies and their role in the technological innovation process.

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References

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Technical Comments: Delay Time

If a major American automobile manufacturer took longer to admit to an error and recall a model of automobile than it had taken to produce the model in the first place, we would not expect the nation's press to remain silent. Yet this is the position that *Science* consistently finds itself in, and there does not seem to have been any public comment, much less protest. Errors are inevitable in all scientific periodicals; in *Science* the avenue for remedying scientific or editorial errors is the Technical Comments section. We recently made a study of the speed with which these corrections reached print, and the study suggests there is room for improvement.

We examined 20 issues of *Science* published between 25 August 1978 and 12 January 1979. We examined the publication delays for the 26 Technical Comments we found, and for a sample of 40 Reports (two selected at random from each issue). The comparison is striking: The average delay from first submission to publication was more than 100 days longer for Technical Comments than for Reports (1). The results are similar if instead we compare the times between the submission of the final revisions and the dates of publications; here the Technical Comments were delayed an average of 71 days more than the Reports (2).

It is not difficult to identify the source of this discrepancy; it is the time that passes while *Science* waits for a reply to the Technical Comment by the original authors. For the 15 Technical Comments

to which the original author replied, the mean delay between the submission of the final revision of the Technical Comment and the submission of the author's reply was 127 days (minimum delay = 31 days, maximum = 272). Once the author's reply is received, the processing of the Technical Comment seems to be accelerated (mean delay until publication = 77 days, compared with a mean delay from reception to publication of revised Reports of 118 days).

Thus it seems that Technical Comments take more than 100 days longer to process than Reports do because *Science* waits an average of 4 months for the author to reply to the Technical Comment. We suggest that this is too long. We suggest (i) that authors be allotted no more than 1 month to submit a reply, and that failure to meet this deadline result in the deferment of the reply to a later issue; and (ii) that steps be taken to accelerate the editorial handling of the first submissions of Technical Comments (delays now average 3 to 4 months). Not all Technical Comments that are submitted present substantive, correct criticism of published articles, and some delay is inevitable. But the influence of *Science* upon the nation's press is great, and delay in publishing corrections can aggravate the effect of those few mistaken or misleading Articles or Reports that do slip through the editorial sieve. Unless there is some improvement, *Science* risks falling behind science.

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Notes

1. For the 40 Reports, the mean delay from first submission to publication was 213 days (minimum delay = 71 days, maximum = 434), while for Technical Comments it was 318 days (minimum delay = 114 days, maximum = 631). One of the Reports in the sample was listed as having been originally submitted in 1928. We took this to be a misprint, although it may be an editorial delay fit for the *Guinness Book of Records*.
2. The mean delay from final revision to publication was 129 days for the Reports (minimum delay = 71 days, maximum = 241), while for Technical Comments it was 200 days (minimum delay = 94, maximum = 406).

Erratum: In the Research News article, "Fields Medals (IV): An instinct for the key idea" (17 Nov. 1978, page 737), Jean-Pierre Serre's affiliation was incorrect. He is at the College de France.

Erratum: In the issue of 26 January on page 343, the credit for the photograph of Albert Einstein should have included the name of the photographer, David Rothman.

Erratum: On page 857, second column, third line, of the article about Eugene Garfield (News and Comment, 24 Nov. 1978), "Garfield's gross" should have read "Garfield's dress."

Erratum: Two errors of affiliation were made in the article about Albert Szent-Györgyi in the issue of 9 February (News and Comment, page 522). Harold Swartz is with the Medical College of Wisconsin, not the University of Wisconsin. Gabor Fodor is at the University of West Virginia, not the University of Wisconsin.

pH Electrode Quiz

QUESTION

The most common cause of pH electrode failure is:

- ☐ Other people break them.
- ☐ Other people let the reference dry out.
- ☐ Cosmic forces de-energize them.

ANSWER

Eventually all pH electrodes age; response becomes slow and span is short. Unfortunately, most electrodes are broken or let dry out before old age takes its toll.

PRIZE

Sensorex Combination pH Electrodes are prize-winners. They have:

- Epoxy Bodies with Recessed Bulb/Safeguard Tips to minimize breakage.
- Sealed, gel-filled references that never need refilling.
- Fast response over the full pH range.

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