Don't Hold Your Breath Waiting for the 'Paperless' Journal

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In the September 2 issue of *The Scientist*, two articles focused on ways in which today's researchers are coping with what many of them describe as "information overload." The lead story in the Profession section carried the views of several eminent scientists, the venerable Linus Pauling among them, who said that the proliferation of printed matter has made it more difficult to keep current with advances in research.

In the Opinion section of that issue, an article I contributed on journal mythology pointed out (while debunking the notion that we are drowning in a flood of new journals) that the main challenge of researchers is to develop efficient means to filter the mass of published material. That is what selective dissemination and retrieval of information are all about.

These discussions serve to raise once again the perennial question of whether a real or perceived superabundance of printed journals will ever be alleviated by the appearance of full-text journals that are published electronically. One would hope so; but I don't think widespread acceptance is going to happen for a long time—if ever.

Sixteen years ago, in Sci-Tech News (29[9]:42-4, 1975), I touched upon that same issue in an article titled "Is There A Future For The Scientific Journal?" At the time, I expressed my doubts that the printed publication would ever be replaced by electronic journals. I wrote: "Besides the reluctance for scientists in general to give up things that are familiar and comfortable, present publishers, advertisers, printers, and editors have a vested interest in maintaining printed journals."

The same vested interests prevail today, and while the proprietary considerations could change over time, I suspect that the scientist's affinity for the "familiar and comfortable" will not easily yield, even to the advantages of electronic journal publication. By now, the researcher's will to publish on paper has become an almost primordial urge; likewise the will of researchers to peruse, review, annotate, and in other ways physically interface with their colleagues' work.

This is not to suggest that scientists have kept themselves from taking advantage of the emergent technologies that provide electronic support to their paper chase. Thousands of subscribers to Current

Contents on Diskette, for example, browse through hundreds of titles each week. (Such scanning also serves the creative instinct of scientists to serendipitously make valuable associative connections.)

The point is made that electronic support systems like Current Contents and other indexing tools, while valuable in their way, fail to provide full-text searchability. However, where such capability has been available to scientists-in chemistry and medicine, for instance—it has not been welcomed, as it has been by lawyers, partly because of the expense involved. The latter are financed by clients, whereas scientists are not. An alternative now is to create CD-ROM files of scientific journals. Presumably, these would be purchased by libraries and would eliminate online fees for each use.

Although alliances of major computer hardware and software

developers may presage the arrival of an attractive electronic alternative to print, I remain convinced that the core printed journals in each discipline will survive alongside electronic versions.

The electronic revolution so far has served primarily to streamline the publication process. However, it also enables us to exploit the potential of both full-text searching and entire-page images.

Just as we were promised that someday there would be a paperless and cashless society, we've been told that printed journals will inevitably become extinct. But don't hold your breath waiting for paperless journals. For now, Gutenberg's printing process still thrives. Those of us who enjoy its pleasures are also able to take advantage of electronic innovations. We can have our cake and eat it, too.