

T/4 Talk to scholarly publishers. 5/31/89

Hats...

So I'm here above all as a user and avid consumer of scientific literature -- and some range of historical and policy oriented as well; but one who has been attentive to new media and to the social organization that goes along with them.

The media are

the PC/word processor, incl. its prior incarnation in time shared mainframes at university centers

computer networks and shared data files, and the retrieval technology these have opened up now cheap mass storage, esp. the CD-ROM.

Just in time to deal with the explosion of scientific product, almost doubling every decade (and ever more interdependent, defying specialization and compartmentation. and the exhaustion of space and funds for the traditional archival library.

Many of you know as much as I do about the technical properties and utility of these media.

I will be giving you some reflections as a user and observer and manager of communities of users.

My main focus will be on electronic networks - eugrams - infelicitous coinage of some years ago ; the CD-ROM may recall some of the more traditional publishers' roles.

Eugrams have focussed attention on PUBLICATION, making public, as a service rather than a product. The book or journal or net is interchangeable as the medium of intellectual interconnection.

I strongly concur the BOOK is here to stay. We generate lots of hard copy in addition, we print our own books on our laser printers. But all the factors of esthetics, economics of production, prestige and property interests of authors converge with those of the publishers and the public.

Journals provide a radically different service.

Some are like books and general magazines -- Nature and Science. Large audiences and entire content of broad interest. Eugrams not much competition to these, though some urgent announcements will be "preprinted" and disseminated over nets .. days or weeks before reaching print.

At the other extreme, and the most problematical, is the specialized journal that has

- a) limited circulation
- b) only an occasional article likely to be sought by any given subscriber.

Here all the factors diverge; and libraries become increasingly reluctant to put out hundreds of

dollars just to keep a "complete" collection. Too costly even against the delay and inconvenience of ordering single copies from a fair use repository. Publishers will resist -- in the end will be ostracized if they impede our goals of effective communication.

Contra the book, author of journal article has no financial stake in royalties -- indeed often pay a page charge. I don't think that norm will change. I submit an article to assure its publication, to have it available to as many interested readers as possible, to assure that it will be incorporated in their thinking, and hopefully that acknowledged through their citations in abundant further publication. I may sympathize with a publisher's profit motive, to stay in business, but that is not compelling. Paid boards of editors are in a more ambiguous position; but the scientific norm will win out -- consider enormous voluntary service many scientists offer through their societies.

So, attractive to most authors and readers will be the alternative, the network, foreshadowed by other systems of preprints and house technical reports.

Take it as given that networks and universal terminal access to them will proliferate. Just as with FAX, we are nearly at point of a terminal in every department if not in every personal office. Fax and eugrams are merging: the one for graphics, and de facto compatibility of transmission standards; the eugram needs less attention and can be broadcast more cheaply and quickly; it provides searchable texts and archival file storage; and it provides draft texts more readily available for comment, revision and redistribution.

Technically, we face a supersaturated solution, awaiting the social organization or the custom of usage for crystallization. And I believe this is happening before our eyes, ... cold nuclear fusion dialectic.

Some subcommunities, mainly in physics, computer science and DNA sequencing are essentially there right now, mainly icw shared databases, which are proliferating weekly. ADD: increasing volume of research done on networks, accessing supercomputers and other instruments, as well as collaborating investigators. Something ludicrous about pasting computer print outputs and printing them in illegible fonts in Nature.

These are still very loosley organized and fragile: I suspect the scientific societies and SIGs within them will be the vehicle for more discipline in the mgt. of the bulletin boards that will be the speed-of-light electronic journals of the next decade.

With the apparat of printing and binding out of the way, substituted by the do-it-yourself initiative of the authors, what is left of the publishers' role? What is his value-added, now that the print journal must compete with the electronic one?

Historically, publishers were gatekeepers. Own interest in quality control, to engage good authors and in turn many subscribers. Cost of entry was high; all put a premium on a select output. All this supported careful editorial work and high quality typography and production. Conversely that prestige would attract the best papers.

Just as with books, a core of such journals will always be in demand -- even if much of the

work will already have been disseminated on the nets, just as is now done in private discussions and meetings. And the eographic versions will be available for retrospective search and retrieval. A few sets of bound volumes will be retained in a central library, and by the individual authors. We will have no space beyond that; and the hard copy storage will be redundant.

Many publishers (none here of course) are playing a different game close to a Vanity Press, with outrageous subscriptions and small lists. They pollute the bibliographic landscape, and most of them will fail in today's climate as more effective alternatives emerge.

Many problems face the network managers -- and scholarly publishers' experience may be highly pertinent, even if that wisdom needs to be transformed in a new environment. The cost of entry, of dissemination, of storage and of access become negligible compared to the motives of the "authors". The precious commodity will be the attention of the readers -- and they will seek proxies for our present editorial boards in filtering what is most credible, most worthy of the readers' time.

One possibility is to graft that editorial system onto the eographic network. It is not the publication product that needs to be filtered so much as the readers' interest. Let it all be deposited, for what little that is worth; the motivation to access it can be guided by reviewers' comments, analogous to the book reviews that weigh so heavily in the guidance of literary taste. In addition there can be a still more open system of pluralistic feedback and comment. Uncommented, uncited works will drop to ever lower levels of visibility with time; they need never be totally obliterated.

We will probably converge on some central repository just for a definitive act of publication. At some point, an author must move beyond a tentative draft to the definitive work on which he stakes his reputation. Perhaps this will coincide with the aggregation of (selected) sets in CD-ROM collections for more economical local use.

So much for the intellectual and critical functions. More taxing are questions of proper allocation of scholarly credit, that life-preserver in the sea of publish or perish. A network of citation and comment may be more authentic than the pro forma paper certificate of the printing press; but that is no guarantee that it will be properly recognized. We have a good omen in the abjuration of paper counting that some deans aver in today's system of academic selection. It's taken a long time for Aristophanes' parody of that, in *The Frogs*, to take hold.

Finally, I've said nothing about Matters of Property - we have a long way to go in working out sensible pricing for informational transactions, whatever the medium. On the net, we can no longer confuse ourselves that we are paying for so many pages of papyrus, when we can deal abstractly with the inscriptions.

By and large, authors of research papers will be putting their work into a public domain where they care a great deal about proper attribution; but the more copying the better, a context that will discourage most organized publishers. What constitutes fair use for other creative works is another matter -- but the copying machine has already generated the prototype dilemmas on a scale that is only modestly amplified by electronic transmission.

(Message inbox:308) From: hundley@rocky2 Date: 14 Jun 89 08:14:09 EST (Wed)

During your SSP luncheon address - for which again thank you; it was wonderfully stimulating and far more than the group had I think anticipated - you mentioned that RU authors own the copyright on print materials, but that the University owns copyright on all nonprint media.

When authors submit to RU journals, they sign over the copy- right to us for print and electronic media. We do allow the author to reuse his own material at anytime and I suppose this would include that material in electronic form. From my perspective I would want to be assured RU as a publisher had the electronic rights to print material in anticipation of electronic distribution.

Is this something we should rethink, redefine?
Welch Library; electronic libraries; OMIM. I can only echo Nina M.

Thank you Victor, Dr. Donner, Nina Matheson. My honor to be the recipient of the Polacsek Lectureship.

Publication - the scientific literature - a central part of the scientific process.

To see further, we're all standing on the shoulders of giants; and the literature is that pedestal.

My talk will address new technologies that are altering our system; particular emphasis on the renegotiation of motives and responsibilities, the social arrangement that influence how these technologies will be used.

We have all played, at various times, different roles in the publication system.

Student	
Teacher	browse
Author	<
Reader	hunt modes
Referee	
Editor reviewer	

Perhaps publisher librarian --> All impacted by new technologies.

Support of copy editor composition printer will return to these roles...

bookseller

Technologies

Oral

script --> typewriter

printing press

telephone = oral

xerocopy = script

telefax

eugram:

email

mass storage & retrieval

laser printer

(hard copy)

Technologies:

- oral tradition mythically the most reliable: the rebbe would never lie. Some broadcast amplification & embellishment.

Clay tablets; graven in stone; papyrus; the script -- we would now say the letter. Bears signature of author.

Scriptoria --> millions of copies --> libraries; durability, but many still lost.

Printing Press.

Multiplication. As Eliz. Eisenstein points out, even more important: the editorial function -- not only in the initial imprint, but in authentic corrections and improvement. (Usually) faithful copies

may slip 'tween my script and the print.

A bibliographic act: the production of a paper or a journal article has a fairly high fixed cost, though many = copies are generated.

Typewriter + Xerox - extension of script.

Broadens dispersion of authenticity.

Dictation - may degrade it

distance author from text

Edit (sometimes).

Opportunity, rarely taken.

Xerocopy

cheap, accurate copies, routine.

In my own case a revival of script. a) own copies; b) reply on copy of what I received.

 Growing industry of preprints; part of process of cheaper print; narrow the gap. A few journals an approximation: little purpose > bibliographic act.: a 3rd party depository, if only 1 library subscribes; "preprint" journals

 and especially if acquired by bibl. resources like the abstracting media, Index Medicus or the SCI.

Broadcast media like radio and TV play a minor part in S to S communication: too costly per minute.

 The press egregiously has been used, rarely reliable as incompatible with technical detail.

 Videotape starting to come in sporadically. (Camcorder) and an excellent editorial medium.

CATV might well take place of some symposia.

 Captive audience in an auditorium -----
 too easy to switch off at your sets.

Telephone like oral, not public and has reached saturation -- not of the circuits but accessibility of respondents. Average of 48 hours to reach my parties, generally longer, than will characterize - these t'ies from perspective of various actors. We are all bound to the system; but our particular interests sometimes

Eugram

E-mail, mass storage and retrieval, hard copy -- laser print

 How I use it

Limitations online edit standards, graphics.
 clarify with fax.

 Bulletin Board = public.

CD-Rom - mass storage at center. Cost of entry & storage << page charges in journals.

 Prolif. of terminals and LAN's, NSF role, NYSERnet.

Author. Eager for prompt and wide dissemination. The assertion of priority, who made the discovery, is important not just for the gratification of ego and allocation of fame and glory. It is the lifesaver in the sea of publish or perish,

in academic appts. and promotions, in qualifying for the

also, what is the point of doing science if not to have exerted some intellectual influence on the scientific community.

So publications should reach as many as possible in that reference group, and should be highly regarded in several senses of that term. To achieve that notice, the paper should have primary substance, assisting that be well crafted and logically persuasive. Better that it be succinct (though I sometimes in my writing, obviously not in my speech, by playing games with the economy of phrase, not necessarily to the advantage of the reader).

Re succinct, many authors are fond of seeing as many of their words as possible in print; and may multiply their compositions a) to augment their bibliographies; b) to reach as many audiences as possible.

In these respects, the authors' interests diverge from the readers' (though in that game the latter must always win).

Readers' motives are various -- we may have an acute desperate need to learn some specialized fact; we may seek a broadening of our general culture; we may be intrigued by the deftness of an experiment or the artistry of creative imagination; we may be beholden to stay on top of -- and make ethical attribution -- to a sector of the literature.

Precious currency we all conserve is time and attention span.

We seek clear and concise writing, don't want to waste time on obfuscation. Above all we want to spread that scarce currency on what is reliable and important. We focus our reading on a few prestigious journals -- prestige is in a feedback loop with authors and readers. The successful journal attracts the best writers, and for that reason the readers as well.

The resource of the journal developed in an earlier era of the printing press. The fixed cost of composition dominated the cost of publication; substantial print runs were needed to justify that commitment.

Overtly, our subscription covers the cost of production of the printed page; we even count how many cents per page in assessing our bargains.

In fact, we have also hired the editors and referees to be our proxy -- in selecting articles that deserve our attention in enforcing canons of taste and scientific vigor in presentation -- and these journals have served the entire community very well.

They are not perfect; they have made many errors in judging individual works and it is important that we have some safety valves, a certain pluralism -- other journals and private media -- that assure that no claim will be totally suppressed, and a certain level of critical dialectic that gives access to a larger republic of science in assessing new work.

The NEJM deserves special commendation for its encouragement of a lively dialectic in its correspondence pages. Brain and Behavior and a few other journals have institutionalized that commentary in its primary process. Science and Nature accept letters in a somewhat more half-hearted fashion. Unhappily very few other journals do.

Electronic media or no I would argue for an independent forum for commentary on works appearing in all the other journals that lack a correspondence section.

The Review article is a further amelioration.

Review.

- 1) help in my triage in dealing with a flood that exceeds anyone's resource of time, wit or attention.
- 2) clarify the arcana of less proximate fields.
- 3) relentless criticism *ex post facto* the primary reviews in the editorial process.
- 4) review work that may have been neglected for having been obscurely published or for whatever reason.

-----o-----
 Publishers' interest overlap but are not necessarily congruent.

 Prestige journals of wide circulation offer profit to everyone; and I believe will survive along with books many more decades of technological advance. Their costs are moderate; and the publishers will be nonchalant about further copying.

Specialty journals carrying a high price and limited circulation are at the other pole. Neither authors nor readers benefit from restrictions on copying, contrary to the economic interests of the publisher. With all sympathy for these as necessary incentives, the science community will insist on wide access.

The new technologies offer economy, instantaneity and wide access at the initiative of the authors.

 Cold fusion as turning point
 but for sometime BIONET - Human genome - and other scientific communication

.....
 In any event full text retrieval of journals already printed is too attractive to be resisted and is rapidly being implemented.

Transparently, the question will be asked, why bother with the print stage?

 Much research on the computer. Silliness of indecipherable print. Extra-informational roles of the journal.

 CACHET value added of editorial process.

 Contra economy and speed of eugram.
 Speed tradeoffs!

A few journals will survive in dual form - print and "preprint" on net and retrieval from database.

 For them and others need to attend to the "market" on the net. Cost of printed pages no longer what is guarded.

Elements of prestige, reader attention, critical acclaim no less important.

 New system, I hope societies will oversee.

 Same editorial function

-> imprimatur, organized voluntary repositories. No cost.

 Continued dialectic pre and post as benefit.

 Will we pay, for, or editors volunteer a function no longer tied to symbolism of print?

Academic system respond more to that dialectic than to counting papers - The Frogs.

When is a deposit irrevocable? The bibliographic act: the authentic version an author should be held accountable for.

DATA BASE as living dialectic, instrument of social intelligence.

 After the golden rule, all else is commentary.

Society for Scholarly Publishing, workshop. 1/17/90

I discuss the disparate, sometimes convergent, sometimes conflicting interests of author, reader, and publisher.

Author. Eager for prompt and wide dissemination. The assertion of priority, who made the discovery, is important not just for the gratification of ego and allocation of fame and glory. It is the lifesaver in the sea of publish or perish, in academic appts. and promotions, in qualifying for reasearch support. Also, what is the point of doing science if not to have exerted some novel intellectual influence on the scientific community?

So publications should reach as many as possible in that reference group, and should be highly regarded in several senses of that term. To achieve that notice, the paper should have primary substance, assisting that be well crafted and logically persuasive. Better that it be succinct (though I sometimes in my writing, obviously not in my speech, by playing games with the economy of phrase, not necessarily to the advantage of the reader).

Re succinct, many authors are fond of seeing as many of their words as possible in print; and may multiply their compositions a) to augment their bibliographies; b) to reach as many audiences as possible.

In these respects, the authors' interests diverge from the readers' (though in that game the latter must always win).

Readers' motives are various -- we may have an acute desperate need to learn some specialized fact; we may seek a broadening of our general culture; we may be intrigued by the deftness of an experiment or the artistry of creative imagination; we may be beholden to stay on top of -- and make ethical attribution -- to a sector of the literature.

We seek clear and concise writing, don't want to waste time on obfuscation. Above all we want to spread that scarce currency on what is reliable and important. We focus our reading on a few prestigious journals -- prestige is in a feedback loop with authors and readers. The successful journal attracts the best writers, and for that reason the readers as well.

The resource of the journal developed in an earlier era of the printing press. The fixed cost of composition dominated the cost of publication; substantial print runs were needed to justify that commitment.

Overtly, our subscription covers the cost of production of the printed page; we even count how many cents per page in assessing our bargains.

In fact, we have also hired the editors and referees to be our proxy -- in selecting articles that deserve our attention in enforcing canons of taste and scientific vigor in presentation -- and these journals have served the entire community very well.

Publishers' interest overlap but are not necessarily congruent. Prestige journals of wide circulation offer profit to everyone; and I believe will survive along with books many more decades of technological advance. Their costs are moderate; and the publishers will be nonchalant about further copying.

Specialty journals carrying a high price and limited circulation are at the other pole. Neither authors nor readers benefit from restrictions on copying, contrary to the economic interests of the publisher. With all sympathy for these as necessary incentives, the science community will insist on wide access. They have no particular incentive to support the profit needs of the publishers; and high prices defeat the authors' as well as readers' interests in maximizing dissemination.

The new technologies offer economy, instantaneity and wide access at the initiative of the authors. There are a number of challenges, whether to publishers, societies, or individual network contributors, in organizing the critical and marketing functions that are now linked to the print publication process.

As is already evident in the information market, some of the greatest difficulties will arise in the establishment of reasonable and efficient pricing, for what was once a product -- a book -- and is now a service.