THE GUTENBERG LEGACY: BURDEN, BOON OR IRRELEVANCE?

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Keynote paper presented to the UKSG seminar Consortia and Site Licensing: so far so good - but where is it leading?, London, January 1999

Some of the ways the medium of print-on-paper journal publishing affects the message the creator aims at the end user, and how the medium of cyberspace is changing the traditional methods of communication.

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What if.....

I want to begin by asking you to imagine a world quite unlike the one in which we live. In my imaginary world, Gutenberg never existed, and, in case you want to argue the toss, Chinese block-printing also never saw the light of day. Instead, before ever Gutenberg came along, people had already discovered how to put text into electronic form. Indeed I would prefer you to think that this invention even preceded the age of the manuscript and the papyrus.

Not satisfied with that, I also want you to picture a world in which electronic networks were invented before the ordinary postal system which, in reality, we still substantially rely on for the movement of paper artefacts. In the early seventeenth century, Barker was the King's printer. What if Tim Berners-Lee, the inventor of the World Wide Web, had been born before him? Of course, I know that all inventions are contingent on a host of others, so my world of speculation is an impossible one. But just for the next few minutes, suspend your disbelief and come and fly with me.

The world we have inherited

It goes without saying that the world we have inherited is very different from the world of my imagination. Indispensable to both worlds are two people, two people who sometimes are even one and the same. There is the author or the person who has ideas, an 'idealist' according to the terminology of my fantasy world. There is also the reader, the user of ideas, the objective to whom the idealist conveys some of the content of a mind. Perhaps the reader is also an idealist as well, hence uniting idealist and objective in one person.

In our real world, there is a whole litany of conveyors, carrying the mind's content from idealist to objective. There are monographs, pamphlets and articles into which ideas are conventionally packaged. There are books and periodicals, physical artefacts which we have found it convenient to use for conveying

ideas in the world of Barker. There are publishers who give a precise physical form to these artefacts, make them known to the world at large and initially distribute them. There are booksellers who vend them on to their objective, the users. There are agents, by which I mean particularly people who negotiate and manage the space between the idealist and the publisher. There are dealers who do the same with some of the space between publisher and buyer. And there are people like many of us, librarians who accumulate and organise the output of the publishers with the aim of making it easier for the users to access what the idealists have produced.

The message and the medium

When I was trained as a librarian, we cut our professional teeth on the ideas of Marshall McLuhan, and we ruminated on the implications of his mantra: "the medium is the message". Publishers are very much in the medium business. Their world is dominated by thoughts of print runs and their relationship to the audiences which the artefacts they produce are intended to reach. They take the output of the idealist and give it a precise set of physical characteristics. They make it look like something rather than something else. So they apply themselves to product design and they believe that the artefacts they produce make a statement which is additional to, but also, they hope, supremely in sympathy with the content which lies between the covers. What you see on the bookshop shelf is identifiably a product of Minerva Fiction as well as making an oblique reference to the mind of the man who wrote *The War of Don Emmanuel's Nether Parts.*

The process of conveying the idealist's output to the mental digestive system of the user is also influenced by others. The publisher employs a printer and a binder, who each impart a little of their own flavour. Then the distributor takes a hand, bookseller or dealer, and another small dash of spice is added. And so, by the medium of the publishing industry, the author's message reaches its objective - but it is because the medium is like it is, that, in some respects, the message reaches users looking like it does, rather than something else. So let us take a closer look at some of the ways the medium of print-on-paper journal publishing affects the message the idealist pushes out towards the objective.

When is an idea?

Ideas occur in their authors' minds. They may be born in a flash of inspiration. More often they grow slowly over time in that gestation process which owes more to perspiration than inspiration, but in which inspiration is nonetheless often present in some measure. And then in the idealist's mind, the moment of truth, a genuine moment of truth, has arrived. The idea, so its author believes, is ready for transmission, to spring forth from the idealist and take its own stand, for better or for worse, perhaps for all time.

However, the publisher, through no fault of his or her own, may not be so ready to react sympathetically to this pregnant moment. There is a cycle of peer review to be completed. Perhaps the journal appears quarterly or even less often. Whatever the frequency, there is a schedule of publication to fit in with. Like buses and trains, journal issues reach us when they reach us, and not always with the hectic frequency of a rush hour. And, like buses and trains, journals can be full and the idealist has to do some heel-kicking and wait till the next issue comes along.

And so it is not unknown for the idealist to give birth to the idea, and then effectively lose touch with it until it reappears later, once it has found its place in the journal cycle. Already a strange distancing has started to develop; the idealist has moved on and can look at the mind's child and wonder whether it really is part of the me of today as it undoubtedly was when first born. That represents a very dramatic impact for the medium to have on the message. That is the world of Barker. But in the world of Berners-Lee, the when of a message does not have to submit itself so meekly to the impact of the medium. The idea can be shot towards its objective, hot from the mental press of the idealist - but only if we acknowledge that catching the issue is, to coin a phrase, no longer the issue.

How long is an idea?

What Gutenberg has left us is an industry, an enterprise in which capital has to be deployed, production organised, income streams assured, profits generated, and new investments embarked on. One of the early fathers of the computer imagined that just a handful of replicas of that invention would meet all the need the world

could possibly devise. In reality, need and price dance round the same mulberry bush. As products become cheaper, they can become more wanted, and vice versa.

Still, there are some economic inescapables. Despite the technological developments of desk-top publishing, the concept of the minimum print run still has some validity. If sales of a published artefact fall below a certain minimum, there is no way the up-front costs of production can be recovered. In some respects, this is the rationale behind the concept of the journal issue. It has to be a certain size to make production worthwhile. Provided it regularly promises a certain range of content between its covers, people will continue to buy in sufficient numbers because the items of interest compensate for the items of no interest. This tends to limit the length of individual journal articles.

The logic of the world of Berners-Lee currently looks different. Leaving sophistication to one side, ideas can be transmitted electronically as soon as they are mature enough, and to any desired audience. On the other hand, reading print on paper does not seem to be limited by any physical constraints experienced by the average user. By contrast, there is a widespread feeling, I believe, that any text extending beyond a couple of screens full is too long to be read comfortably at the screen. The alternative, of course, is to print out and read from a paper copy. In this scenario, all that the world of Berners-Lee does is to decentralise the print function. This is enough to alter the economics radically, but it is not quite the revolution we have been expecting.

What we can understand from all this is that the medium interacts strongly with the message, because of the medium's intrinsic nature but also because of the essential economics that underlie it. Does this mean that, in the world of Berners-Lee, the message will be remodelled to fit the new medium more comfortably? Is the journal article we are accustomed to, simply too long for the medium through which we are now expecting to transmit it? Will the idealists have to get used to having shorter ideas, in sympathy with the new transmission medium?

How wide is an idea?

Being entrepreneurs by nature, publishers have not been content with the constraints of their technologies. They have tried to reduce the up-front costs of their product, so that, even on lower sales figures, costs can be recovered and the business can prosper. But limits still do cut in, and ideas which are intellectually worthwhile may be economically a disastrous proposition. I have heard a researcher admit that his particular piece of research was probably of interest to only ten people worldwide. Yet he could only secure for it the ultimate cachet of recognition by getting it accepted for conventional publication in a journal published in several hundred copies, and each copy being scanned by a number of journal users. Hence, in the world of Barker, the width of an idea is not always well attuned to the process of dissemination.

By contrast, in the world of Berners-Lee, width of appeal need not matter because one electronic copy can serve all possible uses. "Never mind the width; sample the quality" is the relevant slogan. Even the small audience envisaged by my researcher can be well served in the electronic environment. In the dissemination process, there need be no concern for the balancing of quality against breadth of interest or appeal.

Who needs publishers?

The cumulative weight of these observations prompts the question: who needs journal publishers? I have suggested reasons why the concept of the journal issue ought to be phased out. I have suggested that the journal article itself - seen as a package of a certain average length and, as such, in contrast with the monograph - may become irrelevant. The expression of any idea can become as short or as long, as narrow or as wide, as the idealist wants, or alternatively, for reading on screen, needs to be significantly shorter than we are used to. In the electronic scenario, the management of the print medium, quintessentially the publisher's role, can become redundant. The creation of Web sites is so easy, and access to them also so easy, that idealists can become their own electronic publishers.

The new publisher

Having set that up as a possibility, I now want to challenge it, by appealing to clearly observable trends. Initially, the mere creation of a Web site was seen as a remarkable achievement. But in less

than five years, a critical spirit has emerged and sites are now sternly judged according to the quality of their presentation. A new aesthetics of cyberspace is emerging. So many naive starts were made, and the whole environment is changing so quickly that existing sites are having to be remodelled if they are not to be seen as old-fashioned and to be condemned for their appearance, regardless of their content. It should be no surprise really that, in the virtual world of Berners-Lee, design values are coming to be seen as important. Already there are design consultants who will make your site look as modern as you would like - if you can pay their price. The publisher is being reinvented, newly fashioned for the medium of cyberspace. Traditional publishers have not unnaturally shown irritation at times when told that their skills were no longer relevant. Perhaps they were becoming irrelevant, in the precise form in which they have traditionally been exercised. But the new medium has to have some particular look and shape - rather than some other look and shape - and publishers can be excused for thinking that, the more things have changed, the more, in some senses, they have stayed the same.

NESLI at the hinge of change

So this is the setting in which site licensing in general and NESLI in particular must expect to operate. Despite the new technology of the context, NESLI itself immediately calls to mind some of the other traditional players in the traditional sport of journals. Alongside the computer specialists at its heart are the skills of Swets, one of those dealers I evoked in the earlier part of my talk. And the advisory, steering and management bodies set up around NESLI are replete with representatives of the traditional players' groups, publishers, and librarians particularly.

Nonetheless, the NESLI prospectus is brave and mould-breaking. Its predecessor, the Pilot Site Licence Initiative, was content to see electronic provision as a complement to the traditional print on paper journal product. NESLI has expressed a strong preference for electronic content only deals.

There is a world out there needing to be re-engineered in the light of new technology. Already, as deals are provisionally negotiated and offered to libraries which will consider whether to sign up for them, there is clear evidence that mould-breaking may sometimes need to reach a compromise with today's realities.

Gutenberg: burden and boon

My title asked whether the Gutenberg legacy had to be seen as a boon, a burden or an irrelevance. I hope I have said enough to make it clear that it cannot possibly be seen as an irrelevance. I have shown that the medium of Gutenberg and Barker has strongly shaped the messages transmitted through it. We have inherited a pronounced and historically well-established framework for conveying ideas and information. But the new medium which we can now use is so different that it is very probable that the old framework cannot survive. Any attempt to impose it and insist on its continuation is almost certain to be overcome or bypassed, so strong are the differences. Still, it is impossible to forget the past over night. We need to work with the past we have inherited but we also need to recognise that the future is likely to be very different. Rather than just let that future happen, we must all of us play our part in trying to lay down sensible guidelines, quite likely in a much more self-conscious way than was characteristic when the previous medium was developed.

In all of this, we must none of us ever forget that we are simply part players in providing the medium. Publishers, booksellers, dealers and librarians are agents for the process of transmitting the ideas and information from the idealists to the users. Our pre-occupation with the medium makes us leaders of a kind; we can have a very strong influence on the shape of the new medium and require the authors and the users to follow where we lead. But we have to continue to be at the service of others. There is no publisher, no printer, no bookseller, no dealer, and no librarian who is remotely as important as the people who create the ideas which it is our privilege and our duty to help to convey.