Introduction

Sociological Research Online (http://www.socresonline.org.uk/socresonline/) is an all-electronic scholarly journal published on the World Wide Web by a consortium funded by the Joint Information System Committee’s Electronic Libraries Programme (eLib). The aim of this Programme is to explore ways in which the Web might be used advantageously within the research community, and in particular, to address the ‘library funding crisis’. As government cuts in higher education took hold in the early 1990s, university libraries economised on their subscription base and publishers in turn had to raise subscription prices in order to keep titles in place. eLib is exploring ways of breaking free of this vicious circle.

The projects within the eLib programme cover a broad range of themes from document delivery systems and electronic services to electronic archiving. Sociological Research Online is one of a small number of purely electronic journals, a journal for which no print version existed, established with eLib ‘pump-priming’ support. The first issue of the journal was published in March 1996, six months ahead of schedule so that the contents could count towards the Research Assessment Exercise. Since its launch, Sociological Research Online has established itself as one of the leading journals in UK sociology and is beginning to receive world-wide recognition. It now has a ‘brand image’, but there are still problems to be overcome in turning what is currently a free journal into one which can support itself without a subsidy. This article describes the strategy and the goals that the Sociological Research Online consortium have followed so far, and explores the options we see as available in the

The electronic alternative: Sociological Research Online

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ABSTRACT: Examines how the electronic journal Sociological Research Online has rapidly established itself as a leading journal and how it has gained credibility; discusses possible future sources of revenue.
future for permanently funding an electronic journal.

Establishing a credible electronic journal

*Sociological Research Online* currently offers few ‘thrills’ for the Web surfer; that it is electronic is remarkable enough. Throughout its first eighteen months, the emphasis has been on the need to establish the journal as a credible scholarly publication rather than to risk alienating its audience by offering hi-tech wizardry.

The project is a joint venture between the Universities of Surrey (from where the journal is served) and Stirling (who manage a training programme for UK sociologists to help them access the journal), the British Sociological Association (BSA), the learned society for UK sociology, and Sage Publications Ltd, mainstream publisher of books and journals in the social sciences. BSA backing was central to gaining widespread credibility and Sage played a vital role in marketing the journal to the academic community world-wide. This was achieved by paper mailshots and inclusion in publication catalogues to create a wide ‘presence’ for the journal in the sociological community, not limited to those using the Internet.

Establishing an original electronic journal

The operation of the journal has largely mirrored the conventional processes of a print journal, adapted where necessary for electronic publication. Issues are published quarterly and contain refereed articles, book and software reviews, and notes on research resources. Maintaining a quarterly appearance was an editorial decision and although this was not unanimously welcomed by the management board, it has turned out to be useful for the focus that it creates for authors. If articles were published immediately after acceptance, authors might no longer feel it necessary to complete revisions speedily. A quarterly deadline gives authors a target to aim for and this helps to maintain a steady acceptance rate in time for each issue.

Articles published in *Sociological Research Online* are formatted in plain HTML and the whole article generally appears as one document. Articles include a title, citation information, an abstract, a list of keywords, the main text and a list of references. Biographical information about authors appears in a hyperlinked file, as do any supporting pieces which offer additional information in parallel to the text. As with many electronic journals, references in the text are linked to entries in the bibliography at the end of the article.

HTML was chosen in preference to other document delivery systems such as Adobe’s PDF because many of the target audience are still novices in using the Web. While most universities offer a route to the World Wide Web, many computers are not configured for much more than simple Web access – in particular, lab set-ups rarely have the very latest browser or any additional plug-ins. The decision to publish whole articles online as single files was taken to give each article its own definitive URL which can be used for citations and to make it easy for readers to print the article (a survey of readers confirmed that most still prefer to read from paper rather than directly from the screen).

One initiative of the journal was to introduce paragraph numbering. Designed as an aid to citation rather than to impose structure, this mechanism allows authors to refer directly to specific passages in articles and at the same time overcomes pagination problems. Readers may browse articles in their own choice of font, size, page width and so on. As a result, a copy of an article printed by one reader may not have the same pagination as anothers’, and so page numbers are not useful.

Creating a journal of record

A scholarly journal, unlike a newspaper, has to give its authors and readers the assurance that its issues will always be available in perpetuity, so that the knowledge it includes can never be lost. With print journals, the problem of archiving and ensuring permanency has been taken out of the hands of publishers by the
major libraries. The situation for electronic journals is more confused.

Publishers are unwilling to offer online access beyond the immediate past few years. One possible way of giving librarians a long-lasting, if not permanent copy which is being considered by Sociological Research Online is to offer a regularly updated CD-ROM including all the issues of the journal to date. This would ensure that libraries always have access to past issues, regardless of the fate of the journal or the network. However, even CD-ROMs may have a limited life, both because the medium may disintegrate over time and because the software formats may become obsolete.

Publishers’ favoured solution is to set up a national or international archive, probably in conjunction with the British Library. In principle, only one permanent electronic copy is required, as this can serve the global community. At the same time, however, publishers wish to ensure that people are not gaining free access to copyrighted articles. One advantage of having a single, globally accessible archive is that it would be constantly used and monitored, so that if there is mechanical failure or removal, the problem will quickly be spotted. This makes many of the conventional problems of archiving associated with antiquated hardware, outdated software and obsolete file formats redundant as well as allowing publishers tighter control of their texts.

Electronic peer review

One of the more innovative aspects of Sociological Research Online is its behind-the-scenes refereeing procedure. Articles are reviewed by at least three, and sometimes as many as five, referees. When articles arrive at the editorial office, they are translated to HTML and posted anonymously on the Web at a private location. Referees are then invited to that site to download the article and comment via email by completing a report template. The collated reports are sent on to the editor and a decision is then emailed back to the author. We strive to return an editorial decision, including a constructive and extensive report, within six weeks of receiving a paper and none have taken more than eight. The processing of articles and liaison between the editor and review editors is facilitated by a number of Web-based databases and programs that log articles, books and referees and help to maintain the journal’s Web site.

Sociological Research Online is able to publish all the articles the editor accepts in each issue as it does not suffer the size constraints of print journals. This means that the journal is not subject to a backlog of articles and does not have to enforce strict length limits on those articles which benefit from a more extensive presentation.

Gaining credibility and a wide readership is the first hurdle in establishing an electronic journal. With no demand, any consideration of future financing becomes irrelevant. Our readership level continues to increase each month and at the moment the journal is accessed by around 250 individual hosts per day and over 30,000 ‘hits’ per month (subject to the usual shortcomings of Web statistics). Our submission rate is also as high as any comparable social science print journal, currently over 100 manuscripts per year. These figures suggest that in its first eighteen months, Sociological Research Online has established itself as a major journal and the time has come to look to ways to ensure its future.

Future costs and revenue sources

The online management systems of the journal have been designed to make future administration as simple a task as possible. We envisage that running the journal will only require part-time assistance from someone with only modest information technology skills. This is part of a strategy to minimise the staffing cost — by far the largest part of the cost of running the journal. Other costs include a budget for publicity, office overheads (stationery, postage, telephone etc.) and software and hardware upgrades. It is hoped that office space and a Web server will be provided by the host institute.
Three potential sources of income have been identified by the management board of the journal. Revenue could be generated by charging authors a submission fee, charging readers a subscription fee or by offering an additional pay-service.

**Submission fee**

The first of these sources, the introduction of a submission fee, was originally considered but quickly rejected because the revenue generated could not cover costs unless the charges were exceptionally high or hundreds of papers per year were received. At a time when submission charges are unusual in the social sciences, authors would almost certainly be discouraged from submitting to a journal that demanded payment for submissions.

**Subscriptions**

Subscription systems and charges are currently being explored by publishers who are looking for a 'one-stop' solution to charging. Problems of document security and reader authentication are being overcome and it is likely that a number of subscription systems will appear over the next few years. One easy solution for the journal would be to contract the problem to a third party. This appeals to librarians who can benefit by only having to deal with one agency providing a range of electronic publications rather than many independent providers.

At the moment some of the technical difficulties of a subscription system are too big for an independent project. User authentication is one problem, the best solution currently being to check that 'readers' use a computer within a subscribed domain. Every computer with access to the World Wide Web has a unique identifier called an Internet Protocol (IP) address. Although servers can be restricted to deliver documents only to recognised IP addresses, this raises three problems: the IP address can be forged with little technical knowledge; articles can easily be 'copied' to non-subscribers in digital format; and academics on sabbatical or working at home will be frustrated at not having access to information to which they are legitimately entitled. The alternative to restricting access to registered IP addresses is to use a name and password system, but this is more demanding on users and more difficult to police.

Administrating registration, licensing and the payment of subscriptions is so complex and uncertain that it is likely that in the near future only subscription agents will be able to do the job, although in due course new software may make it easier.

**Other sources of revenue**

The third source of revenue suggested above is funding from ancillary services attached to, but not directly part of the journal. Advertising revenue is one possibility. However, because anyone can implement a Web page or site at little cost, only small charges can be demanded from advertisers. While the world's most popular sites, such as global search engines, can raise high revenues, even successful small sites will find it impossible to obtain significant sums from advertising. More important for *Sociological Research Online* has been an 'exchange' programme which has resulted in advertisements for the journal in the traditional print media in return for banner advertisements on its Web site.

One other possible source of income for *Sociological Research Online* is from selling the software that has been created to facilitate the electronic publishing process to those who want to start other electronic journals. There is also the possibility of income from consultancy, making use of the skills which have been developed in establishing *Sociological Research Online*. Of course, this is not a general solution to the problem of generating an operating income. Now that the journal's mechanisms are in place, it would be easy to run several more journals at the same site, taking advantage of economies of scale and this could increase the site's attractiveness to advertisers as well as reducing the level of income which each individual journal needs to bring in.
Conclusions

The most important task in establishing an original electronic journal has been to reach a wide audience who are unfamiliar with the new medium. Not only do we want these people to read *Sociological Research Online*, but we want them to write for the journal and to feel that they are contributing to a widely read and respected forum. Achieving an authoritative base has been the single most important factor in our work so far because without a firm footing, there is no momentum for a successful journal.

Having established a familiar presence, it is then necessary to look at the various ways in which income can be generated to support the project on a long term basis. Three routes for income generation have been considered in the previous section but it is unlikely that a journal will, for the time being, survive on any one single source of income. The way forward will be to exploit the most lucrative of a number of areas and monitor how the medium develops and how new sources might be exploited. The down side to this is that we have not yet identified a clear new model for the support of electronic journals that can be replicated by others.

In the immediate future we are likely to see an explosion of electronic journals from commercial publishers and a proliferation of titles launched by academic institutions interested in disseminating work in a new way. Many of the current batch of new electronic journals follow the pattern of the latter; they are produced by one or two enthusiasts in an institution, are hosted on their own servers and often offer exciting effects to maximise the potential of the Web. Over a medium term, however, they are likely to stagnate or disappear as the amount of time individuals can spare decreases, the novelty wears off and readers favour the traditional quality standards provided by peer review. It is then that the advantages of the relatively conservative approach adopted by *Sociological Research Online* will become most apparent, as it becomes increasingly seen as the electronic alternative to conventional paper journals: different, but with as much influence and with standards as high as the best.

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