NEWSPAPERS, THE INTERNET AND DEMOCRACY

COLIN SPARKS

Introduction

Colin Sparks is Lecturer at the Centre for Communication and Information Studies, University of Westminster, Watford Road, Harrow, Middlesex HA1 3TP.

The general question of the relationship between information technology and democracy has provoked considerable debate. There are those who argue that the interactive potential of computer-mediated communication will lead to a flowering of a new Athenian democracy in which everyone will have their voice and their vote. On the other hand, there are those who predict increased manipulation, stratification and control. I should like to put those general debates to one side and concentrate on a much narrower question: the future of the newspaper.

That, in itself, is an extremely complex question which involves all sorts of different aspects. I shall not have anything to say here about the much-debated question of the ways in which the advent of information technology have altered the gathering and processing of news. Neither am I concerned with technical questions about the nature of the necessary electronic apparatus. My focus is upon the shift from the printed newspaper to the electronic newspaper, considered as a social and economic process. This shift is still very much in its infancy, and since I am dealing with the future, much of what I say is speculative. Almost certainly, things will turn out rather differently than I say they will.

There is, nevertheless, good reason for being interested in this shift. Almost everyone who has seriously considered the possibilities of democracy, however defined, in the contemporary world has realised that the media, and in particular newspapers, have an indispensable role in political life. The nature and character of newspapers, their degree of freedom, their availability and their content, are central to the citizen's level of knowledge about the world of politics and economics. This aspect of newspapers I call in this paper their "public enlightenment" function. Changes to newspapers are also changes to democracy.

Much that is said about this subject, particularly by those involved in newspaper production, romanticises the relationship. The plain fact is that a lot of this talk is self-serving cant designed to further quite other ends. Despite this, however, it is certainly true that at least some newspapers carry at least some information which is indispensable to the conduct of rational political deliberation and is quite unavailable to the ordinary citizen through any other channel. To the extent that they carry this material, newspapers may be said to be one of the main channels through which a public sphere may be formed.

The Impact of Computing

Computer mediated communication has already had an effect on the process of newsgathering and of production. Most newspapers, certainly most newspapers in the developed world, are today written, edited and laid out using computers. Their content is already digital. Now the computer is beginning to alter distribution. Many newspapers are developing electronic editions, mostly on the Internet, particularly on the World Wide Web. According to industry expert Stephen Outing, as of January 9, 1996, "more than 800 commercial newspapers world-wide have on-line services either operational or under development." This is an area of very rapid development, since in 1993 there were around 20 such papers and at the end of 1994 only about 100. His prediction then was that "by the end of 1996 there will be 1,500-2,000 newspapers available on-line" (Outing 1996a). Although, such is the speed of development in this industry, there is today something of a "weblash" and it is often argued that such optimistic predictions are obsolete, Outing was still, in mid-August 1996, claiming that there were "more than 1,500 on-line newspaper services world-wide (with about 1,400 of them being World Wide Web services)," and persisting in his prediction of 2,000 on-line services by the close of 1996 (Outing 1996b).

For its enthusiasts, this development promises a massive expansion of the public sphere. Not only will the citizen, often confronted by a local newspaper monopoly, have access to a large number of titles, but there will be greatly enhanced potential to contribute to the actual production of public debate. Sitting at my desk, I will now be able to have access to a vast range of material. Not all of this "cornucopia" will be of the kind that the more naïve democrats might find desirable, but alongside the pornography and the public relations, the right-wing ravings and the most detailed sports results imaginable, it will certainly be possible to find a plethora of public enlightenment material. I can also join in the development of the new kind of participatory newspaper being pioneered by the ***San Francisco Bay Guardian***, which aims to allow readers to become active in the reporting and analysis of news stories. One enthusiastic commentator summed up the coming age thus:

> *The real beauty of the new technology is its ability to enable newspapers to not only enhance their researching and reporting capabilities, but also to deliver a better, more audience-aware product in an immediate and inexpensive way. Digital delivery is greatly improved by publication on the World Wide Web, the fastest growing part of the Internet. One of the main attractions of the Web is hypertext, a system that seamlessly links computers and files continents apart. For example, a story about a poll on the performance of a government official could include color-highlighted links that readers simply click on to get more in depth information about his or her voting record, recent speeches, or a news story about cam-*

paign promises. Using the hypertext capabilities of the Web totally eliminates the proverbial 'news hole' and opens up an unlimited amount of 'space' for presenting news product (...) By using computer technology to produce and deliver a new product, newspapers have welded both the old (literacy-print) with the new (computers-digital delivery) and created a better model (Lapham 1996, 4-5).

We can, on this account, expect in the future, and as a direct result of new information technology, better access to more public enlightenment material, and we will thus be better equipped to act as responsible citizens in democratic political life.

Commercial Newspapers

It seems to me that there are considerable grounds for regarding this optimistic version of the future of the newspaper with some scepticism. In considering the consequences of the developments usually termed "convergence," we have to reject the romantic idealisation of the press as "fourth estate" and begin from a realistic assessment of the nature of existing newspapers. Although there are still newspapers that are subsidised by states, parties, churches and eccentric millionaires, the dominant model world-wide is that of the commercial newspaper. Consequently, newspapers stand or fall by the strength of their business model, not their editorial policy. A business model, very crudely, has two main parts: the costs of operation and the raising of revenue. In the model of the commercial newspaper, the provision of editorial content is one of the costs of operation.

All of the editorial content of any such newspaper is ultimately subject to a calculus whose product is profitability, not public enlightenment. That is not to say that the nature of the editorial content is of no importance to the owners of newspapers. On the contrary, it is vital to the generation of revenue. One of the simple equations which is true for most versions of the overall model is: no content = no readers = no profit. One major aim of the activities of journalists, whether they are producing high-minded political commentary, grubby stories about drug-abusing popular entertainers, or truly astonishing revelations about the sexual activities of the British Royal Family, is the need to win and retain readers.

Another of the main aims of all journalism in this model is to win and retain advertising material, and thus to increase revenues. This is achieved in part precisely through delivering the attention of the right kinds of readers in the right numbers, through the nature and quality of the editorial content itself. The other way it is achieved is by the construction of special sections of editorial copy, usually in the form of supplements, devoted to particular advertising-rich subjects like banking, commercial property and so on. It is worth recalling that the physical size of the "newshole" in any commercial newspaper is ultimately determined by the amount of available advertising. Another of those simple equations runs: more advertising = more pagination = more news.

Generating the necessary editorial copy is an expensive business, since it requires large numbers of highly-skilled, and usually highly-paid, journalists. Not every newspaper is ***The New York Times***, but a broadsheet British quality daily, like the London ***Times***, will typically employ between 200 and 300 journalists, and perhaps rather more support staff. The ***Asahi Shimbun***, a leading Japanese daily paper, has more than sixty overseas correspondents. The costs of editorial material are high, particularly in those areas like overseas news, investigative journalism, war reporting, and so on, which

are central to the enlightenment functions of newspapers. If a newspaper is to do more than fill its pages with the "rip'n'read" material from the wire services, and press handouts generously provided by the PR staffs of large corporations, then it needs to spend large sums of money on journalists to report and edit original news stories.

These costs constitute part of the outgoings side of a business model which, as we have seen, usually raises revenue from two sources: sales and advertising. The proportions between these two revenue sources vary widely. In the USA, apparently, advertising accounts for about 80 per cent of the revenue of a "typical" newspaper (Bogart 1989, 48). In the UK, the five titles of the "quality" broadsheet press, which constitute that segment of the press that carries by far the most public enlightenment journalism, depend on advertising for perhaps 60 per cent of their revenues. One study of the effect of new technology on the British print industry stated that:

> *Advertising accounts for 60% of the revenue of Business Magazines, 40% for consumer magazines, 80% for regional newspapers and 50% for national newspapers in the UK and similarly significant proportions of income in other EU countries* (Spengler, Neary and Minio 1995, 2).

Newspapers in countries in which the market economy is relatively underdeveloped might perhaps have a higher dependence on sales revenue, but they are clearly evolving in the same direction.

The benefit of this business model from the point of view of democracy is that it delivers a very large quantity of public enlightenment material to a fairly large audience at a very low direct cost per unit. It is this which makes some newspapers such a valuable constituent element of democratic political life. The provision of public enlightenment material is consistent with, indeed necessary to, a business model that seeks to attract the subscriptions of the educated elite, and to sell their attention to the advertising industry. The model has, of course, substantial drawbacks. In practice, such newspapers are not equally available to everyone. In the UK case, public enlightenment broadsheet newspapers only account for around 15 per cent of total national daily newspaper sales. The mass sales are reserved for newspapers which contain very little of such material. The real effect of this business model is to produce an "enlightenment gap" between the educated and relatively prosperous middle classes and the mass of the population (Sparks 1993; 1995).

The Commercial Benefits of Computers

There are powerful forces driving the owners of newspapers to think about electronic distribution. Editorial costs are important, but they are not the main costs a newspaper faces. To borrow the very useful distinction developed recently by Harmeet Sawhney, printed newspapers are a "carry" medium, in that they place the onus of transporting the symbolic content on to the originator of the product (Sawhney 1996). Presses and lorries cost money. Newsprint and ink cost money. Printers and delivery staff cost money. Production and distribution accounted for at least 50 per cent of the costs of a large-circulation US newspaper in the 1980s (Bogart 1989, 48). Sharply rising, newsprint costs since then will have raised that figure. Electronic newspapers are, in Sawhney's terms, a "fetch" medium, in that the bulk of the costs of transporting the symbolic content is borne by the consumer. It is true that the originator must invest in computing and support staff, and that the cost of this is not negligible if the

operation reaches any scale or pretends to any distinctive quality, but the consumer buys the terminal and pays the telephone bills. On the face of it, electronic delivery looks like the answer to a press baron's dreams.

There is an additional factor which leads the owners of newspapers to consider electronic delivery an ideal business proposition. It is held as an article of faith by many in the business that newspaper readership is everywhere declining. Reality is much more complex than this: for example, the British quality press market has expanded, on average, at a rate of one per cent per annum for the last thirty years. In the developing world, there has been an explosion in the number and circulation of newspapers. It remains the case, however, that particularly in the US, but also in Britain, the more locally-based newspaper industry has suffered a long-term decline. Views on the reasons for this vary widely: one recent comment by a US industry leader attributed it, amongst other things, to the liberal biases of reporters and the lack of coverage of religion and pets in the average US newspaper (Neill 1996). However this may be, it is certainly true that the complex set of social relations between newspapers and readers that has marked the developed world is changing, if not breaking down.

The large circulation of the "enlightenment" newspaper is a product of the habits of a particular social group formed in what some sociologists would call "high modernity." Its readers were largely male, moderately educated, recently enfranchised, relatively privileged office workers. They genuinely believed that voting every few years was extremely important, and that they needed to be well-informed about the world in which they were significant political actors. They travelled to work on public transport. They could read the paper on the train or bus or metro. Many could, as a semi-legitimate part of their working life, start the day with a coffee and glance at the paper. They travelled back from work on public transport, and could read an evening paper during the journey. Their domestic arrangements, very often, were of such a patriarchal character that, once home, they could bury themselves in their paper whilst social reproduction went on all around them.

Life is no longer like that. The highly educated, long-enfranchised and entirely cynical, but not very privileged, office worker of today is more likely to be female than male. She is very sceptical about politics and public life and places much less faith in her ability to change the world through voting. She drives to work and listens to the radio on the way. The working day legitimately starts with a cup of coffee and switching on the computer. She drives home again in the evening and, of course, she has to spend her evening cleaning, cooking, washing and ironing, not to mention looking after the kids.

What has disappeared from these everyday rhythms of life is the space in which the newspaper was habitually consumed. The compelling evidence of changing lives suggests to the owners of printed newspapers that their core market is under threat and that they need to seek other outlets. The early evidence suggests that the electronic newspaper may fit better the emerging rhythms of life. Access patterns show peaks just after the start of the working day and again during the lunch period. It looks very much as though these services are accessed from work and that it is seen as more or less legitimate to spend the first part of the day using the company computer to glance at the electronic news. At lunch time, the company can again be expected to pay for the capital costs and for the telecommunications charges, since the employees are demonstrating their loyalty to the firm by taking their lunch break at their desks.

These factors explain the Gadarene rush of newspaper proprietors on to the Internet. They see it as providing a delivery system which reduces their costs by up to fifty per cent and that reverses the slide in circulation that threatens both forms of revenue stream. The electronic newspaper will be attractive to the post-modern reader and to the target-conscious advertiser in a way that the printed newspaper cannot be.

The Difficulties of Making Money

There are, however, real problems to be confronted. Some are external to the medium itself, but others are internal to its business model. Since most of these experiments are very new, and the evidence upon which to base judgements very sketchy, it is difficult to draw definite conclusions, but there are some suggestive early trends. These trends indicate that there is a problem in transporting the business model of the printed press into the electronic area.

Consider first the revenue raised from direct charges, either in the form of subscription or street sales. Newspapers are relatively cheap in their printed form, partly because they spread much of their cost across a large readership. The smaller the readership, the greater the cost to each individual of receiving symbolic material of the same quality and the smaller the amount that can be charged to advertisers for reaching them. The first consequence of these facts is that the dream of individualised news resources delivered through electronic means is unrealisable. Whatever may be the technical possibilities, the provision of news unique to one person, or even to a very small group, is too prohibitively expensive for the bulk of the population to enjoy. The simple economics of news means that it must necessarily have an audience with a "mass" character. The best that the "Daily Me" will ever produce is a personalised selection from news material produced for much larger audiences.

Secondly, even with a simple "broadcast" type of product available today, which makes relatively little use of the interactive potential of the medium, the evidence suggests that individuals are reluctant to pay directly for access to the basic product. There may be a subscription market for special services, like access to the newspaper's electronic archives, although in practice regular use of this facility is likely to be limited to professional researchers. Many of this group might themselves prefer the controllable costs of a CD-ROM to the open-ended financial commitment of a dial-up service. Few people have the time or the interest to pursue the deep background to very many news stories in their private capacity. Some elite newspapers, like ***The New York Times*** or the ***Wall Street Journal***, might be able to charge readers in Wyoming, or Kyoto, or Berlin, for the basic electronic product, since the printed version is not easily available on the day of production. Overall, however, the customer is very reluctant to pay directly for the electronic version of the newspaper.

The electronic newspaper will therefore be obliged to rely entirely on advertising revenue, at least for the foreseeable future. If it can deliver a large number of visitors, and in particular those with the time and money to use electronic access regularly, then the electronic newspaper should be an attractive prospect to advertisers. In one important respect, the prospect of advertising on an electronic newspaper is much more attractive to those who want to sell goods and services than is the printed version. It is technically possible to measure the audience exposure to any advertisement much more accurately than with the printed newspaper. Not only is it possible to measure how many people will have seen a "banner" by counting simple "clicks," but

it is also possible to record how many of them have been sufficiently interested to follow the advertisement through by means of a "click through" count. Charging can therefore be very much more precise and advertisers will no longer worry that they are wasting their money because nobody is actually looking at their efforts (Cyberatlas 1996a).

From the point of view of the consumer, too, there are distinct advantages. With classified advertisements, the possibility of electronically indexing them makes searching for particular items in which one is interested much simpler. These make up a substantial part of the advertising matter carried by many newspapers. Estimates of the importance of classified advertising are various. The highest is that they make up around 80 per cent of the revenue of the average US paper, but more believably they account for "40% of the average newspaper's revenue base" (Seybold 1996a). If I want to know about the availability of tenured posts in media studies in research universities, I no longer have to wade through pages of openings for physics professors and lecturers in accounting, only to miss the perfect job because it is buried in a general advertisement for several different posts. I can have the search done for me electronically (Seybold 1996b, 31).

The problem is that this very indexing potential makes the link between editorial and advertising content much weaker than it is in a printed product. If one wishes to advertise to any public whatsoever in printed form, one has to find a "carry" vehicle on which to piggyback. If one wants to look at advertisements of a particular type, one is forced to purchase the appropriate vehicle. The vast growth of specialist magazines is the clearest possible illustration of these factors. If one wishes to advertise on the Internet, then one can enter the marketplace independently of any "carry" vehicle. If one is seeking particular forms of advertising on the Internet, there already exist any number of powerful search tools that enable one to find what one is looking for. It is no longer necessary to pass through a particular editorial gateway to get to this or that advertising. Of course, it might still make sense for particular kinds of advertising to be grouped together at one attractive location, but the obvious possibility exists of a site which collects together electronic advertising in the same way as does a newspaper, but which dispenses with the editorial content.

The newspaper faces the threat of what is generally called in the trade "disintermediation." By this hideous term is meant that potential of the Internet to provide opportunities for self-publishing of various kinds independent of the traditional gatekeepers. There is little to stop Thomas Cook constructing its own attractive site which advertises its full range of holiday services directly to interested customers. It has no need to place these advertisements expensively in electronic newspapers.

It might be objected that, while it is true that for the major advertisers, or possibly associations of companies wishing to advertise in the same field, it would make sense to construct an electronic means of reaching their potential customers without the assistance of newspapers, there remain large classes of advertising for which this is not really appropriate. For example, the thousands of people who wish to buy and sell used cars are not likely to construct their own individual sites specially for this purpose. They will continue to need the services of an intermediary which gathers and classifies such advertising. This reality of the advertising market fits very closely with the established attempt by newspapers to redress the circulation decline by getting ever closer to specific localities. Transferred into an electronic future, this version argues:

> *In the face of shrinking circulation, publishers are trying to redefine themselves as information resources instead of a print medium. In the broader role, they would be capitalizing on their near monopoly, in most cities, on local information. The first step is to use the information gathering organisations to offer newspaper editorial content and classified advertising, already digitized, over online computer networks or the Internet (...) When local news-gathering resources can be delivered by broadband networks to home computers, these news organizations will be ready. Newspapers would also like to use their association with local advertisers to take a part of the directory advertising (yellow pages) business, now highly profitable and largely uncontested* (Baldwin, McVoy and Steinfield 1996, 275-76).

While such a market is clearly present and will continue to provide a strong revenue stream, it is much less clear that this kind of advertising is necessarily connected to news content.

It is perfectly possible to conceive of an electronic product which consists solely of classified advertising. As a matter of fact, such products already exist in printed form, although they occupy a marginal position in the newspaper world. Devoid of editorial copy, they consist wholly of classified advertising material, and are purchased by those who wish to buy particular items. There is also a large number of rather less extreme versions of this model, in the form of free newspapers, called "shoppers" in the USA, that contain very little or no editorial content and are distributed free of charge to households, depending entirely on advertising for their revenue. Editorial content of the public enlightenment kind is not a necessary complement to classified advertising, even in print.

The searchable nature of the electronic medium suggests that such products would be at least as well suited to it as they are to print. Of course, because they have few or no editorial overheads, sites based purely on advertising would be cheaper to run, and thus able to offer much more competitive rates than newspapers which invest heavily in journalists.

In fact, current developments suggest that the close link between the editorial and advertising material which is a necessary function of the physical constitution of the traditional printed newspaper is already being eroded. The top ten sites for Web advertising in January 1996 contained no public enlightenment media, and the list was in fact dominated by search engines. Similarly, the top ten Web advertisers were not the general consumer-product retailers that figure prominently in overall advertising spends but computing and telecommunications companies (Cyberatlas 1996a, 2-3). In turn, the classified advertising business is being contested by large and predatory new market entrants like AT&T, Microsoft and AOL, producing products tailored to local advertising markets. These organisations, whatever their other strengths, do not have developed local newsgathering operations, and show few signs of doing more than repackaging existing content in the field. The large "news room," reportedly 200 strong, that Microsoft has constructed in Seattle appears to be more designed to repurpose news material derived from the linkup with NBC than to generate original copy.

The newspaper industry has recognised this threat, and one of the responses is to set up consortia that syndicate on-line classified advertising across different titles and groups, like ADHunter in Britain and AdOne and AdQuest in the USA. While the

local newspaper titles constitute one set of entry points to these systems, there are also national gateways. It is not at all clear in the long run that the local entry point will prove the most popular access route: after all, one of the main functions attributed to new technology is the erosion of spatial barriers to information. But if the outcome is that even local classified advertising is most efficiently sold in a national electronic form, then it is difficult to see what reasons there might be, apart from those famous attributes of big media companies like public spirit and generosity, as to why the editorial product should any more be produced. If it is not necessary to the process of selling advertising, and if very few people are prepared to pay for it directly, then it has no independent commercial future.

This is particularly important since most, if not all, electronic newspapers today are subsidised in one way or another by a printed parent. If the basic newsgathering costs continue to be borne by the printed paper, then the electronic version is correspondingly cheap to produce, provided that the news rights include the necessary copyright clearances. According to a recent industry analysis, the average start-up costs for an electronic newspaper in the US were $500,000, and between seven and twelve new staff were hired to maintain the service (Reuters 1996). Large and elaborate sites, like those produced by CNN, or some UK national newspapers, cost many times as much as that per annum to maintain. The sums involved are not negligible, and they certainly suggest that there will be no flood of new entries providing a greater editorial choice, but they are not prohibitive for the large and well-found news organisation. Whether operations with such costings can sustain themselves on their advertising sales, even with their primary content subsidised by their parent, is questionable.

It is generally agreed in the industry that in order to attract the attention of site-visitors, and thus of advertisers, it is essential to offer something more than simply an electronic version of the existing product. The further one goes down this road, of course, the greater the costs. Although hardware is relatively cheap compared to printing presses, attractive copy for the Web requires at least as much preparatory work as does the printed equivalent. The more original material, and the more computer specific it is to be, the more journalists dedicated to this enterprise there must be, and the more computer staff there must be to turn their copy into attractive Web pages. At present, no-one knows whether there is enough advertising money around to sustain such activities. As one recent industry analysis put it: "Many newspaper publishers are still sceptical of the (...) potential profitability of online ventures" (Seybold 1996c, 20).

Let us assume that there is, and that a number of electronic newspapers survive and prosper. This prospect, in turn, suggests economic problems. Irrespective of the future of newspapers, it is highly likely that the provision and consumption of some kinds of electronic services will expand substantially. If it becomes possible for advertisers to reach their target audiences electronically, either via their own dedicated site or through a collective "billboard" type of arrangement, then why should they bother to place their advertisements in printed newspapers? It is possible to argue that: "most major display advertisers (...) will still want a mass circulation carrier," and that therefore at least one major component of the revenue of big newspapers will be safe (Barnett 1996, 29). Even if this remains true, it still leaves a very considerable proportion of the current newspaper advertising market open to electronic competition. To the degree that the electronic newspaper is able to sell advertising space, it is also demonstrating

the obsolescence of its printed parent as an advertising vehicle. The greater the success of electronic advertising, therefore, the greater the threat to the major revenue stream of the traditional newspaper.

In addition, to the extent that the electronic version of the newspaper draws readers away from its printed parent, it presumably reduces the readership of the latter. It is hard to see why someone should pay twice for access to the same kind of product. The fixed costs of the paper-based part of the operation will therefore have to be borne by fewer and fewer subscribers. It follows that either editorial expenditure will fall, or that cover price will rise. In either case, it is likely that the circulation of the printed newspaper will fall still further.

Economic realities thus seem to suggest that the development of an information super-highway based on the model of an expanded Internet poses acute long term problems for the survival of the public enlightenment press. Factors internal to the business models which are fundamental to a commercial newspaper mean that it is likely to become a more and more difficult area from which to wring profits. One industry report suggested that:

> *New ways to prosper are still available, as long as you can hold out until the turn of the century to recoup expenses(...)the number of on-line users will surge by 2000, and the innovative and the well-backed will survive* (Love 1996, 3).

There is, of course, absolutely no guarantee that being innovative and well-backed will be connected to a discharge of the public enlightenment functions of the traditional newspaper. The survival of a few electronic titles owned by the richest media corporations is not impossible, indeed it is likely, even if their rationale is corporate image rather than profit. A further possibility is that a large newsgathering organisation unburdened by existing investment in print-based production and distribution, for example Reuters, might make use of its product to build a direct relationship with an elite international public. Both of these developments would be at some cost to the smaller, the weaker and the more localised, that would face a squeeze both on their advertising revenue and their circulations. Electronic delivery is thus very unlikely to improve the range, quality and diversity of public enlightenment material. At best, its effect will be more or less neutral, and at worst it will lead to a further reduction in the number and depth of the sources carrying such news.

External Problems

It is at this point that we need to think about the external factors which might cause problems for the relationship between newspapers and democracy. Some of these simply exacerbate the problems with the commercial newspaper model itself. Studies of the users of interactive services, and of electronic newspapers in particular, are in their infancy. Their results vary considerably and are the subject of hot debate. One aspect, however, is not in dispute. They all sound as though they were specially written to prove the continued viability of Marxism. They are well known and we do not need to go into detail here. Users tend to be predominantly male, well-educated, employed and well-paid, and from the dominant groups in society. To take an example from a study of US users:

> *Males represent 66% of Internet users and account for 77% of Internet usage. On average, WWW users are upscale (25% have income over $80K), profes-*

sional (50% are professional or managerial), and educated (64% have at least college degrees) (Nielsen 1996, 5).

This profile reproduces in exaggerated form the realities of unequal access which are present in the printed press.

If we take an international comparison, then the figures are even more striking. Internet access and service provision is very unevenly distributed geographically. The figures are best for hosts. On one estimate, in 1996, 64 per cent of all hosts in the world were in the USA; 17 per cent were in Western Europe; four per cent were in Asia; Eastern Europe, Africa and Central and South America accounted for around one per cent each (Cyberatlas 1996b). On another estimate, of the approximately 13,000,000 hosts in the world in mid-1996, around 8 million were in the USA. Next highest were the UK and Germany, with around 600,000 each. South Africa, with just over 80,000, was the only African country with more than 400 hosts. Slovenia, at just over 10,000 had fewer than Iceland but more than India, at around 2,000 (Rutkowski 1996). Given those background figures, it is not surprising that a search at the start of September 1996 suggested that of the 1,400 or so Internet-based electronic newspapers, only three were in Africa.

The fact is that, far from being even as uniformly distributed as literacy, the ability to generate and to access the specifically electronic versions of newspapers is sharply restricted, both socially and geographically. To the extent that electronic newspapers flourish, the evidence so far suggests that they will provide a service of public enlightenment for a narrow elite.

It might be objected that what the evidence alluded to here demonstrates is the characteristics of "early adopters" and that, as the technology diffuses, so the social profile of its users will approximate more closely to that of society as whole. The evidence here is contradictory. Some recent surveys have been interpreted as showing that, in the USA at least, Internet access is slowly becoming universal. On the other hand, the rate of growth of the home-based PC market is everywhere slowing down, so it may not be that the PC will ever achieve the high level of penetration of, for example, the television set. There is simply not enough evidence yet to reach a conclusion on this, so let us assume that there will be a steady democratisation of the equipment, skills and time needed to access the Internet. It would therefore follow that these external obstacles were only transitory barriers to the electronic newspaper.

There are two responses to this. The first is to point to the fact that the evidence with regard to electronic newspapers at least demonstrates that the current users are not defined so much by their individual demographic characteristics as by their employment type. If the characteristic form of access to electronic newspapers is from the workplace, then it is likely that these newspapers will be the preserve of those whose work situation permits such luxuries. It is easy to see how the lawyer or the architect or the professor might have access to these services as an extension of their normal working practices. It is much more difficult to see how the production worker or the carer or the fast-food operative will have similar professional opportunities. The printed newspaper can be folded up and stuffed in a pocket. It can be read in short breaks during working time. The PC, or even the PDA, is a less portable and robust technology.

The second response is to say that there are different kinds of possible interactive futures, that they are not identical, and that the evidence suggests that the early adopt-

ers of one other major model are quite different from those of electronic newspapers. A second model of the interactive future is quite different from the highly dialogic communication of the Internet. We may call this the "semi-broadcast" model. It depends upon a physical infrastructure characterised by high bandwidth down and relatively low bandwidth up. It is not highly switched. It has its origins in television distribution: in the UK case in satellite television, but elsewhere perhaps in cable programming. This second model is being developed to distribute entertainment programming and it is unlikely to have a high degree of interactivity built into it. Among its attractions to investors are that it requires a much lower capital investment than does a fully interactive system, which supposes relatively high band-width cabling built out either to, or very near to, the point of consumption, complete with elaborate switching mechanisms. The semi-broadcast model can operate perfectly satisfactorily using either satellite transmission or MMDS for its down-stream flows and the existing telephone network for the relatively limited upstream flows of programme choice. It is not a model well-adapted to the high degree of interactivity supposed in most accounts of the electronic newspaper.

These two models are not contradictory: it seems to me extremely likely that they will in fact both constitute elements of the physical infrastructure of the information superhighway of the future and both represent ways of utilising its potential. There is no good reason why the set-top box and the personal computer should not both constitute entry points to different kinds of services (Calabrese and Borchert 1996). There are, however, two points to be made about this coexistence. There is no obstacle to those who have the social position, the cultural capital and the physical equipment to access the interactive model also having access to the broadcast model. There is, however, a major obstacle to those who have access only to the broadcast model also having access to the interactive model: they will simply not have any of the wherewithal to do so.

Secondly, what we already know about the profile of the early adopters and heavy users of the broadcast-type services is that they are skewed towards a different social group than are those of interactive services. The take-up is disproportionately amongst the poorer sections of society. It is also the case that the key site for the installation of these services is the home, rather than the workplace. These social groups also happen to be the main consumers of the "tabloid" style newspapers which carry very small amounts of public enlightenment material.

This popular press already contains considerable material more or less directly related to broadcasting and other forms of entertainment. That kind of copy could relatively easily be exploited in the new medium. The much-touted possibility of being able to combine textual and video based forms of presentation, for example, seems to make much better sense in sports reporting than it does in the coverage of parliamentary affairs. The very least that is likely to happen is that the link between the popular press and entertainment will be intensified, at the expense of whatever public enlightenment content these papers still carry.

Although its basic economics are likely to be based on either subscription or pay-per-view, or some combination of the two, it will nevertheless be an attractive site for some kinds of advertising, particularly the kinds of general display advertising carried in many newspapers. It thus presents another challenge to the revenue base of the serious press.

This challenge will be all the greater because the serious press itself has been expanding in the area of entertainment content over the last few years. Admittedly, the

content of this material is often rather different than that in the popular press, but it is clearly the same kind of material appealing to the same kinds of interests. The music may be classical rather than popular, the stars those of opera rather than cinema, but the material is addressing essentially similar appetites. There is no reason why this kind of copy, and the associated advertising revenue, should not migrate to the "semi-broadcast" kind of communication.

There is, then, at least the possibility that the impact of new technology will be such as to strengthen, rather than remove, the already existing barriers to the public enlightenment function of the press. The division between this democratic aspect and the general entertainment function of the press will be embedded in the very wiring of the information superhighway. This social differentiation will also correspond quite closely to a social differentiation in which access to material concerned with public enlightenment will be restricted to a relatively narrow professional layer.

It is a frequent, and entirely valid, criticism of Habermas's original formulation of the classic bourgeois public sphere that it failed fully to recognise the exclusionary social basis of this realm of rational discussion. It can be argued that the extension of political democracy and the development of the traditional mass media have, very far from constituting a refeudalization of society, extended the public sphere to a much wider layer of society. One possible outcome of the shift from the printed to the electronic newspaper, and the concomitant shift away from broadcasting towards narrowcasting, is that the new public sphere thus constituted will embody very clearly similar social exclusions to that of the eighteenth century.

Conclusion

Overall, I have painted a very gloomy picture in which the serious press, which is one of the main bearers of public enlightenment in contemporary society, faces the possibility of multiple threats to its revenues as a result of the development of electronic means of delivery.

The main problem internal to the newspaper industry itself is that the transition to electronic delivery throws into crisis the business model upon which the commercial printed press has come to depend. Consumers are very reluctant to pay for access to electronic services, and thus subscription revenue is threatened. On the other hand, the nature of electronic advertising is such that it is potentially no longer dependent upon editorial copy to reach the consumer. Thus the advertising revenue of the press is threatened. There is therefore unlikely to be a blossoming of electronic titles, and many companies will probably withdraw their current efforts. If some of the larger titles do continue, either as subsidised prestige projects or as genuinely commercial entities, then this success is likely to be at the expense of the smaller and weaker printed papers, as would be the success of any new entrant from outside the traditional newspaper industry.

Externally, the very skewed distribution of the on-line audience means that at present access to electronic newspapers is effectively an elite preserve. This may erode in the future, at least within the richer and more developed countries. It is, however, difficult to see how the electronic newspaper can easily replace the existential functionality of the printed tabloid for the mass market. Access to the electronic press is likely to fit easily into the daily lives only of those with relatively autonomous professional occupations.

It is also likely that, while the construction of the physical basis for the information super-highway will gradually be extended almost universally, at least in the developed countries, there will be two models of interactivity. On the one hand, there will be the highly interactive and empowering model based on an extension of the current Internet, and on the other hand an entertainment-based model with much less built-in interactive potential, effectively extending television broadcasting. It is the former of these that is capable of realising some of the undoubted potential of the interactive newspaper. It is also likely that this model will be relatively more expensive, time consuming and difficult to use, and will tend to be restricted in its take-up. At best, the electronic newspaper proper, centrally concerned with public enlightenment, will be available only to a minority. For the majority, the information super-highway will mean a merging of newspaper and television around entertainment-based material.

No doubt I have exaggerated preliminary indications into general trends, and it is entirely true to say that it is much too early to reach firm conclusions. Before we can say with certainty what shape the newspaper of the future will take, we will need a lot more hard data to test the speculations outlined here. I think, however, these speculations should be taken seriously, if only as a counter to some of the wilder claims for democratic empowerment which fog this whole issue.

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