MEDIA LOGIC IN CYBERSPACE:
REPOSITIONING JOURNALISM AND ITS PUBLICS PETER DAHLGREN

In a relatively short time, the mass media environ-ment has become saturated with talk about cyberspace, the vast universe created by the linkage of computers. References to the Net (Internet: the global digital net-work) and the World Wide Web (the region of the Net characterised by hypertext, and more lately by moving images and sounds), together with the emblematic http://-formulations, as well as all the celebratory discus-sions — plus a very few dissenting, critical voices — have become ubiquitous. For those who are themselves plug-ged into cyberspace, the mass media discourses reinforce a daily experiential reality they encounter with this new medium. Yet, along with all the excitement, there is also an element of anxiety. For those who are not plugged in, the constant media allusions to cyberspace signal that there are major information developments taking place to which they are outsiders. Those who are not linked up may worry if they should be; outsiders are of course plugging or rather, logging — in continuously, and thus becoming insiders. Those who are linked up may feel overwhelmed by the information at hand or by the re-lentless marketing of upgraded hard- and software which can turn new equipment into antiques in a mat-ter of months. Such anxiety may derive at least in part from a popular sense that cyberspace is not only about a new-fangled technology, but also about newer emerg-ing social and power relations — about a techno-elite which is becoming clearly demarcated from the techno-lumpen.

This insider-outsider divide can even be found within journalism, though it is vanishing fast. The interface of journalistic practices with this new technology, and the interface of cyber-journalism with its publics, has pro-

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ceeded at a very rapid pace, and few people working in the field can still comfortably dismiss the significance of cyberspace for journalism. Also, it seems that most journalism schools around the world share this view, even if not all of them have the technical, financial and professional requisites to incorporate computer mediated journalism into their curricula to the extent they would like. For anyone contemplating a career in journalism, familiarity in the use of computer technology and a capacity to make creative use of the Internet are as central as the use of a typewriter was previously. In fact, typewriters have become an antiquated technology. In the U.S., for example, the last remnants of the typewriter industry were recently phased out. No new ones are produced there anymore; the future of journalism is digital.

Certainly journalistic institutions, specifically news organisations within the various mass media, have all seen cyberspace as a crucial dimension for their future. Indeed, for the moment, there is an intense scramble among major transnational information industries to get a strong foothold in the cyberworld. One gets a sense of a gold rush climate, where many corporate actors are moving to stake out a claim — though the viability of the economics are far from self-evident, even in the newspaper realm, as Colin Sparks points out elsewhere in this issue. In Sweden, it is estimated that as many as two-thirds of the newspapers will be electronically published by the start of 1997 (Sahlstrand 1996), though in the U.S., the figures are more modest (Ross and Middleberg 1995). It is not even clear, however, whether the future of on-line news will remain in the hands of newspapers: The software computer giant Microsoft has recently merged with NBC News to generate on-line MSNBC, which combines broadcast, cable, and computer technologies. Among Web users, the most appreciated on-line newspaper in 1995 was not even a newspaper, but rather CNN's on-line site (Meyer 1996).

The future institutional and economic contours of journalism in cyberspace are still unclear in the present turbulent situation. However, it is not too early to begin reflecting on what might be the implications for the practices of journalism itself, as it moves into cyberspace. Journalism is carried out in specific institutional circumstances, within concrete organisational settings, and under particular technological conditions. The advent of cyberspace will inevitably impact on the factors which shape how journalism gets done — and may well even colour how we define what journalism is. In the discussion which follows, I will try to probe some of these possible changes by looking at some of the features which are salient in cyber-journalism today. Also, as journalism changes, so does its relationship to its publics. Indeed, even the traditional notion of public may undergo modification in the cyber context, as I will discuss. What follows is not an exercise in futurology — the success rates for such prediction tends to be quite low. Rather, what I hope to do is to specify some current features of cyber-journalism which strike me as significant and probe there possible implications.

Sociological Sobriety

Discussions of the futures of information technology and their socio-political implications clothe themselves at times with one or the other of two basic ready-to-wear, off-the-rack attitudes. One is some version of cybereuphoria, which emphasises not least the use of the technology for enhancing democracy. The other we can label digital dystopia, which underscores the use of the new technology by the various power elites to maintain their positions but with ever more effective control. Both have a

rhetorical allure in this specific context, but I do want to avoid them as long I can, since in prematurely donning one or the other, one risks misjudging a situation which is still much in flux. Clearly, in regard to journalism in cyberspace, one will find evidence to support both views.

It is important to take as sober a sociological view of these developments as possible. Certainly one of the key sociological facts to keep in mind in regard to cyberspace is how relatively few people are in fact involved with it. For starters, if we consider the spread of computers in the world a computer with a modem is a technical prerequisite for participation in cyberspace current estimates suggest that only about four percent of the world's computers are found in the Third World (Hamelink 1995, 62). There are thus comparatively few users outside the developed nations. Data on Internet users in the West, which Ian Connell (1996) neatly summarises, suggests that Net use is still very restricted: in North America, while 17 percent of the population may have access to the Internet, only 11 per cent had used it. (In fact, even these figures may be high; other estimates suggest less than half of these numbers. See Stacey 1995.) The users are largely well-to-do, white and male.

Further, the use of the Internet for serious information searches or for journalism appears to be a minor sideline when compared to the mega flows of trivia, entertainment, chatting, role playing and other games, commercial transactions, and not least, pornography (Sardar 1996). Thus, we are talking about a very small, yet rather elite segment of the population in Western societies whose use patterns of the Internet are very much of a minority. The small numbers, however, are to a degree offset by the sociological profile of the group: affluence and high education are important variables in the shaping of opinion and political climates.

Journalism, for its part, cannot remain unaffected by the dramatic technical and institutional changes taking place. It is important to situate cyber-journalism in the context of contemporary developments in communications in the world today, but perhaps it is even more imperative that it be understood in the broader frame of the historical evolution of journalism. Cees Hamelink (1995) specifies four major and interrelated trends in world communications, all of which are of relevance for cyber-journalism: digitalisation, consolidation (both in terms of technical and institutional consolidation), deregulation, and globalisation. These trends, which are by now quite familiar, are contributing factors to the larger picture of the historical evolution of the media generally, and journalism more specifically.

Journalism is in many ways emblematic of the modern era. Yet many of the historical, taken for granted premises of modernity itself have come into question, for example the links between political, economic and/or technological progress on the one hand, and human freedom, happiness and general well-being on the other. As the end of the century and the start of a new millennium draw nigh, the future looms more questionable than it did in the past. The optimism for a democratic society once associated with the role and capacity of modern journalism has become more ambivalent. This ambivalence does not decrease as journalism moves into cyberspace.

The Waning of "Classical" Journalism

As an institutionalised set of practices located within the media, journalism of course does not remain unaffected by the transformations of society, culture, and the media themselves. The "high modernist" or "classical" paradigm of journalism, a product of

specific historical circumstances, is waning, as a number of authors have argued (cf. Altheide and Snow 1991; Hallin 1994). This historical mode took shape early in the present century and based itself on traditional liberal ideals of democracy and citizenship. In this framework, journalism in the mass media is seen as providing reports and analyses of real events and processes: through its narratives, classical journalism makes claim to be accurate and impartial renderings of a reality which exists independently of its telling of them and external to the institutions of journalism. It is aimed at a heterogeneous citizenry which basically still shares the same public culture. Citizens use journalism as a resource for participation in the politics and culture of society. Journalism in this mode serves not least as an integrative force and as a common forum for debate. Even if the journalism in the real world has never perfectly operated like this, it is this paradigmatic model of how it should be which has guided our understanding of it.

To say that this mode of journalism is waning is not to suggest it has vanished, or that it will. Rather, it is to call attention to the fact that the ensemble of historical factors on which it has been predicated are changing, as we move from high modernity to late modernity. We can already see the signs of new developments, but they are by no means clear, and we cannot say with any certitude how they will evolve. What we have at present are the contours of an as yet incomplete and even at times contradictory portrait of classical journalism in transition. I would underscore in particular the following trends, each of which first manifested itself in mass media journalism, but has also developed a counterpart in cyber-journalism:

1. The sheer amount of available information available to citizens is increasing, obviously enough, but so is its density. That is, information within the media environment is so ubiquitous, so crowded, that the competition for attention is becoming an ever important feature of public culture. At the same time, the vast majority of media output not journalistic in nature, and the competition for attention to the media must also be understood as one between journalism and non-journalism. Among the oceans of information flowing through cyberspace, only a small portion can be deemed journalism, and the attention it gets may be even disproportionately smaller.

2. The media are increasingly blurring the distinctions between journalism and non-journalism; infotainment is by now an established concept within the mass media, and we see an increasing trend toward the popularisation of journalism. There is also a concurrent shift away from print (e.g., decline in "elite" press) to audio-visual formats in much public culture, at least within the media aiming at large scale audiences. In cyberspace, the boundaries around the specifically journalistic become blurred by the abundance of readily accessible and socially relevant raw information.

3. Correspondingly, in the mass media, the self-understanding of journalism as a professional culture and the professional identity of journalists are becoming increasingly heterogeneous, as the boundaries of the profession become permeable toward related media occupations such as public relations, advertising, editing and lay-out, and information brokerage. In cyberspace, the definition of "journalist" may soon be merging with a number of other possible information-handling functions.

4. Within the mass media, an increasing self-referential symbolic world is emerging,

which is to various degrees removed from the actual experiential world of most people. Such a position can be (and has) been readily overstated, but there is no necessary denial of an extra-media reality in noting that collective memory, for example, is increasingly a memory of shared media experiences. In cyberspace, we have of course forms of "virtual reality" which provide fuel for various theories of the post-modern. For example, problematic issues of documentary representation have been with us for a few years already as a result of digital photography. Such issues will multiply with the multi media possibilities of cyber-journalism.

5. Among mass media audiences we can note a general international decline in "reading publics." Also, citizens are becoming increasingly fragmented, as specific market niches emerge from continuing sociological segmentation. Hierarchical differentiation into "informed elites" and "entertained majorities" is on the increase in many countries. Overall, the strong concept of "the public" as the voice of the inclusive citizenry moves more toward a weak version of media spectatorship, complemented by a plethora of smaller, more exclusive "interpretive communities." Cyber-journalism undoubtedly contributes to such trends.

These various developments suggest the need to continually renew our understandings of the conditions and possibilities of both journalism and of democracy itself. What a full-blown "postclassical" or late modern journalism might look like we can only speculate. Clearly, the democratic context in which journalism is to operate is evolving historically and geographically. Journalism is in the process of repositioning itself in a more fractured society, and perhaps establishing new kinds of relationships with its publics. In its cyberspace version, journalism has unprecedented opportunities for enhancing democracy; it remains to be seen how well it takes advantage of them.

Media Logic in Cyberia

Let us now turn to journalism as a phenomenon in cyberspace. It may be helpful here to keep in mind the notions of media logic and formats (Altheide 1985; Altheide and Snow 1991). Though these concepts were developed with the mass media in mind, they can also help us to probe how the particular circumstances of cyberspace shape the way journalism gets done in that medium. Media logic refers to the particular institutionally structured features of a medium, the ensemble of technical and organisational attributes which impact on what gets represented in the medium and how it gets done. In other words, media logic points to specific forms and processes which organise the work done within a particular medium. Yet, media logic also indicates the cultural competence and frames of perception of audiences/users, which in turn reinforces how production within the medium takes place.

Media logic will vary according to the medium and the genre, as well as between the social sites of media production and consumption. Further, the more focused concept of media formats points to the very specific ways a particular medium's or genre's materials are defined, selected, structured, and given final expression. Thus, cyberspace as the realm of networked computers can be said to have a media logic, while cyber-journalism will be expressed in a number of media formats. If sense-making is consistent with and bounded by the grammatical structure or internal logic of a language, as the Sapir-Whorf hypothesis suggests, then it can be argued that any specific set of media logics and formats will tend to structure particular perceptual and cognitive

biases — and deflect others. Specifying exactly which biases are promoted and discouraged, and how specific media formats will evolve involves considerable cultural guesswork, and I will be rather restrictive on those points. However, I do think we can with some confidence identify a number of primary and highly interrelated aspects of cyber-communication which are at the core of its media logic, and which will continue to give shape to the formats of cyber-journalism in the future (I make use of some categories developed by Newhagen and Rafaeli 1996, in what follows). These key qualities are: multimedia, hypertextual, interactional, archival, and figurational. I will discuss each briefly in turn.

Multimedia: Digitalisation means that a common electronic language, based on the "bits" of the computer, is emerging for all mediated communication. Thus, text, sound, voice, as well as still and moving images are increasingly being translated into a common digital form. There is a lingering perception that the Internet is basically about texts, with perhaps some jazzy still visuals. This is not surprising, since it is these forms which dominate at present. However, on-line services using sound and moving images are well established, and it is only a question of time before cyber-journalism will become significantly multimedia in its formats. Institutionally we see the trend well in place, as signalled by MSNBC, as mentioned above. At present this technical convergence is most apparent in the CD-ROM formats of games and educational materials, but journalists will more and more be working in this multimedia context. For example, the newly launched DVC technology — the digital video cassette — is a compact portable technology which will greatly facilitate ENG recording for use in digital relay.

The lingering text bias of cyber-journalism is starting to give way to an audio-visual version. This will no doubt mobilise many of the same kinds of discussions which have been familiar in regard to television journalism, i.e. about the affective image vs. the cognitive text, about sensationalism and popularisation. However, multimedia cyber-journalism is obviously more than TV news on a computer screen: it is precisely a convergence of several traditional media and thus constitutes an historic step in the development of journalism. What formats will prevail, what kinds of representational conventions will emerge, what types of stories will be more suitable/less suitable for the multimedia logics of cyber-journalism? Will new text-image ratios derive from the new technology? Will "information" in a journalistic sense imply something different than it does today; will an "informed citizen" mean something else? Will "cyber-infotainment" drive out a journalism inspired by the classical paradigm? It will take a few years before we get some solid answers.

Hypertextual: In the textual domain, cyberspace operates to a great extent via associational linkages. Key words can easily be indicated in a text; when clicked by the marker, these words open up to other, related texts and/or provide information for further sources. This is the basic logic of the World Wide Web (www) and the various so-called search engines which can be utilised to quickly zero in on the particular topics that one is looking for. In practice, hypertext can be said to disperse the fundamental linearity which has characterised written and printed texts from the very beginning. One need no longer simply follow a text from its beginning to its end, but can now use key words within it as jumping off points to look at other texts or sources, including audio and still/moving images. One can return to the original text in the process, or alternatively leave it behind as one goes on, hypertextually, to others.

This attribute of hypertext suggests that textuality in cyberspace may signal a new period in communications history in which texts and images — and the modes of apprehension associated with each — may be moving another few notches closer to each other. If journalism on television combined moving pictures with a form of speaking somewhere between oral and printed language modes (the first TV journalists came from print and radio), hypertext may be combing the textual tradition with the non-linearity associated with visual thinking. At this point, of course, hypertext and multimedia are still in their infancy. That they constitute historically new elements of media logic are undeniable, but exactly how they will develop, how they will be put to use in journalism, and their consequences are by no means self-evident.

One attribute of text on the computer screen which does seem rather clear at this point is the bias toward terseness. While it is indeed easy to retrieve even lengthy texts from archives and data bases, the day to day practices of cyberspace suggest that the computer screen is not hospitable to texts whose length fills more than one or at most two screens. The notion of "scrolling" comes from the old pre-book when texts were written on scrolls. With our contemporary reference points of print media, scrolling on a computer screen soon begins to feel sluggish. The slowness, coupled with the emphasis of linearity which scrolling involves, is at odds with the breath-taking possibilities of hypertext and the general sense of the rapid and virtually infinite access one has at one's disposal. Cyberspace, then, continues to foster the trend to shorter texts that we see in the press, and the faster cuts and sound bites associated with television news in recent years. The terse texts of hypertext are congruent with the emerging multimedia logic of cyberspace.

Interactional: A central feature about digital communication in general is that technically there is no directional bias: sending and receiving are in principle equal functions at the technical level. Thus, the possibility of interactivity, the levelling of the distinctions between senders and receivers, has been a major element in the arguments about how cyberspace can enhance democracy. Technical possibilities are of course always modified by sociological realities, and we can share in Ian Connell's (1996) dismissal of such excessive notions that cyberspace will soon allow everyone to become a do-it-yourself journalist. However, the interactive character of cyberspace is not without its significance. While users are able to choose what they will attend to from the vast oceans of information to which they have access, they can also selectively pre-filter what is to be received and what is to be excluded from ongoing new information, such as journalism. Various programs and services make it easy today to put together a daily "personalised package" of news and information. With CRAYON (http://crayon.net/), for example, one can choose from dozens of on-line news services and newspapers organised into sixteen categories (including U.S. news, regional and local news, world news, editorials and opinions, business report, information and technology report, and tabloid page). This tailored package can then be delivered on screen daily.

While such preselectivity may both eliminate elements of serendipity in users' news experiences and further fragment the public, interactivity nonetheless does open up the potential for new relationships between journalists and their publics. I will pick up this theme again below, but for the moment let us take note that the interactional and multidirectional quality of cyberspace does contribute an important element to its media logic in that the possibilities for individual, point to point public feedback to

journalists and to news organisations in the same medium which they use is a decisive difference from the situation in the mass media. Journalists can not only be "talked back to" but also engaged in discussions with members of the public. This can help to reduce the distance which normally exists between journalists and their audiences. However, it should also be noted in regard to interactivity that it can leave electronic traces: cyber contacts can be readily registered. This becomes relevant in a number of contexts, from audience/user research with the best of intentions, to commercial market research, and the more baleful record-keeping for purposes of political or individual surveillance.

The technical potential for an anarchic organisation of fully interactive cyberspace — a quality particularly lauded by those who emphasise user-control and virtual communities — is in itself compelling. However, the reality is that there is a "disciplining" process currently at work. Transnational soft-and hardware industries, as well as governments, are shaping cyberspace in ways which are compatible with their interests, in a sense curtailing its interactive potential. The impending demise of the Net's common carrier status in the U.S., for example, can be seen in this light. Interactivity will continue to be a central element of the media logic of cyberspace, but we can expect that it will become even less symmetrical and more contained than it already is.

Archival: An important capacity of the Net is the access it provides to data banks and other archives. From the standpoint of media logic, this means that users of cyberspace for journalism are in principle no longer so bound to the present, as with the mass media. They can search for previous news stories and background material to complement a current news item. In doing continuing stories, mass media journalism is always faced with the problem of how much familiarity they can assume on the part of the audience with each new instalment. The archival capacity, together with hypertext, alleviates much of this problem, since users can interactionally themselves fill in what they need, depending on how extensive the archives are and how developed the hypertext is.

Users can search further on the Web using various search engines. And beyond the easily accessed Web are a number of immensely large commercial mega-databases such as Dialog, Nexis-Lexis and FT Profile. While the rates for using such databanks may incur high costs with prolonged searching, such sources contain much information not available on the Web.

Figurational: I derive this term from the concept "figurative," which points to the use of a word or phrase in a way different from its usual meaning, evoking a comparison between the two. (The more common term "virtual reality" does this as well, but it brings with it a number of different associations, as well as epistemological issues which I do not feel are productive to pursue here.) Thus, the figurational feature of cyberspace's media logic is the incessant figurative quality of its representations in regard to "real life;" modes of interaction, social bonds, even designated spacial and temporal parameters bear a figurative or metaphorical relationship to their non-mediated counterparts. They are different, yet tantalisingly similar. This central element of the media logic of cyberspace links up explicitly with contemporary social theory, notably notions such as the compression of space-time (Harvey 1989), the disembedding and re-embedding of social relations (Giddens 1990) and simulation (Baudrillard 1983). While cyberspace shares with other media the capacity to shorten distance and time, it has a particular quality which becomes most apparent in two-

person dialogues or group discussions. The sense of being co-present and socially interactive, in a different order of space and time, becomes quite compelling for all users, not just those engaged in various role playing adventures.

We can anticipate that the figurational dimension will be increasingly enhanced technically (not least via the refinement of multimedia and hypertext), and become ever more imperative as one of the definitive traits of cyber-communication. Again, as far as journalism is concerned, we can only speculate about the impact. CNN made a name for itself with its raw, real time coverage. That may prove in comparison to be only a foretaste of the possibilities that cyberspace could provide in the future. Questions about how such journalistic components as analytic distance, overviews, and background will fare under such circumstances will also have to be postponed for a while.

New Tools of the Trade

In the past decades, the practices of classical journalism have been rather well delineated by sociological research. Topics such as newsgathering, sources, modes of representation and discursive strategies, and professionalism have been studied in this literature. All of these become affected by the growing trend towards on-line journalism. If the multimedia, hypertextual, interactional, archival, and figurational qualities define the major pillars of cyberscpace's media logic, the actual practices are still evolving. Indeed, they are being improvised, as the technology quickly develops, becomes adopted, and is put to use. At this point, though, we can identify some of the main uses to which cyberspace has been put journalists thus far. There are already a number of journalism educational textbooks which explain in detail how to best make use of cyberspace's potentials (cf. Garrison 1995).

Computer assisted reporting, which seems to be the accepted term in journalism schools, obviously lets the journalist, like any other user, to search the Web as well as the commercial databanks for information. With the powerful search engines now available, a journalist can quickly find much of the information he or she is looking for in a very short time — as well as useful information he or she perhaps was not looking for but came across in the process. More and more public documentation and government records are appearing on line; being cyber-fluent is increasingly important for much daily reporting as well as more in-depth features. Journalists can search special on-line versions of traditional print materials (libraries, etc.) as well unique materials available only on the Web, such as electronic journals.

Further, journalists can also carry out sophisticated analyses of the information accessed. To illuminate trends and patterns, to follow up on hunches, to find coherence in events which may at first seem random — all such analytic procedures becoming so much easier for the digital journalist. Suddenly, for example, investigative journalism becomes economically viable for many more media organisations, since so much of the legwork can actually be done on the keyboard, thus greatly reducing the time involved.

An important part of the offerings on the Web for journalists are the many sites which are explicitly aimed at professional assistance and enhancement. The U.S.-based PROFNET and the British ExperNet services are designed to put working journalists in touch with experts who can provide specialised knowledge which a journalist might need in the course of his or her work. QuadNet provides specifically science and tech-

nology experts. The commercial Internet Newsroom, to which one can subscribe, is a sort of librarian-teacher which helps journalists make more effective use of the Net. A handy starting place in this regard is the site Internet Journalism Resources (http://www.moorhead.msus.edu/~gunarat/ijrl/); here one can get a quick overview of the many kinds tools, services, and resources on the Net which are currently available to journalists.

New problems and issues arise with new technologies, of course. One traditional journalistic issue which takes on a new guise in this context is the reliability of sources. When information is pulled up on the screen, it has a very compelling, convincing aura about it. It suggests to us that this is impartial, impersonal Truth; it seems hard to argue with. Yet data banks are created by people; behind any piece of information there is a human hand. Data banks and the "home page" of any organisation on the Internet, may have certain interests they wish to promote. Information may be "sanitised" to foster a certain image. It can be more difficult to critically check cyberspace sources that other kinds.

In a similar vein, an old journalistic pitfall such as a "telephone addiction" can be made even deeper via digitalisation. The journalist who seldom leaves his or her desk but only uses the telephone instead of also probing written materials, meeting people, and visiting live milieu — may end up with a "keyboard addiction." He or she may become too encapsulated in a convenient cyber reality, losing touch with other dimensions of the social world.

Despite these and other pitfalls, the advantages are impressive. Journalists and news organisations can make use of the interactional capacity of cyberspace to get various kinds feedback from the public, such as direct comments on journalistic endeavours as well as more market-oriented canvassing of audiences. Interviews and press releases can be done electronically. Other tools available for journalists are mailing lists, news groups and chat rooms. These are three different versions of on-line public discussion networks. With mailing lists, messages are sent to each member's e-mail box; news groups have their on on-line sites to which one can go; and chat rooms are live real-time discussion forums. There are thousands of networks within each of these three categories, each network consisting of a group of people who discuss a specific topic. Journalists can use such networks as resources and/or participate in them, though one has to be careful to observe the established "netiquette" — the informal rules of behaviour which guide participation. In one of the very few sociological studies of cyberspace use for public life, Fisher et al. (1996) encountered considerable resistance in using the Net to do research about the Net. Many people, especially in the U.S., feel strongly that the "one to many" type of communication, as used in survey research, is antithetical to the spirit of the Net, and is readily associated with commercial exploitation or instrumental manipulation. Journalists will have learn to negotiate cyber situations appropriately.

On-line Publics and Netizens

I will end this discussion with some reflections on the public and its relation to cyber-journalism. In the above-mention study, Fisher et al (1996) were able to distinguish several ideal types of civic interaction on the Net, including what they call the communitarian, which emphasises the ideal of participatory democracy and mutuality; democratic mobilisation, in which cyberspace is used to by activist interest groups

to organise themselves; and like-minded exchange, where discussion reinforces the values and perceptions of groups and discourages contact with those who think differently. Cyber-journalism takes on slightly different relevance as it interfaces with each of these.

Schematically, citizens using the Net, "netizens," can be conceived on a continuum of increasing "netizen activity." As a first step, users can simply take in on-line that which is offered, subscribing or merely attending to particular output as they do in regard to the mass media. In this mode, netizens are largely acting as traditional audiences for journalism. Next, they can selectively pre-structure the journalism they receive, as discussed above, as well as actively use the Web for their own information searches. At this point, all three modes of cyber civic life become potentially activated, though the ease of pre-selection may give the category of like minded exchange a certain edge here: patterns of thought, social location, and media can reinforce each other.

From this point, we move on to netizens as discursive publics and their participation in the various on-line fora I referred to above, particularly the news groups found on UseNet. Journalists who interact with such netizens, find that they are getting not only informed opinion, but many times useful, concrete information. Here we see a preliminary step in the direction of democratic mobilisation as a form of civic life on the Net. The cyber-public can begin to function as very handy sources for journalists, providing access to information — and perspectives — which normally may be remote for journalists. In turn, the contact with journalists can help facilitate strategic use of the mass media, as groups come to serve as sources and attempt to have their agendas taken up by the mass media.

Cyberspace thus fosters the emergence of multiple mini-public spheres. Elsewhere (Dahlgren 1995) I discuss what I call the advocacy domain of the public sphere: particular interests or communities organise themselves, communicate among themselves, and at some point begin to interface with the larger, common domain of the public sphere, that is, the major mainstream media which reach a majority of the citizens of a society. Here an active interface between the functions of journalism and a dynamic cyber-public sphere come into view, keeping in mind all the sociological sobriety I invoked to at the outset, as well as other issues which arise in regard to applying the public sphere model to cyberspace (cf. Sassi 1996) — specifically the small size and fragmented nature of such a sphere. Yet — to once again retrieve a key point — while this is an elite strata of society, it is of considerably more significance than its numbers may imply. While "the public" is becoming increasingly dispersed and segmented — we are no longer only united by the media but increasingly also divided by them — cyberspace is becoming a vital link and meeting ground for a particular strata of the public: those who are civically engaged and politically mobilised.

If we take this logic one step further, beyond the various discussion networks, we find that there is another large and highly significant domain of activity in cyberspace, namely the thousands of non-governmental organisations (NGO's), organised social movements, lobby groups and political activists who make use of the Net. These more developed forms of democratic mobilisation are extensive and significant for modern, extra-parliamentarian politics. Actors in this realm now have at their disposal a global communicational capacity previously unavailable. While we may need to temper some of the optimism expressed by a number of writers (cf. Frederick 1993) in regard to a

global cyber-civil society, it is evident that such uses of the Net can play a key role in the shaping of elite opinion, not least at the transnational level.

This capacity is being used in many settings and for a variety of struggles, and there is a considerable degree of co-operation and assistance between various NGO's and social movements. For example, the politically progressive California-based Institute of Global Communications (IGC) is an umbrella organisation for several other major networks: PeaceNet, EcoNet, ConflictNet, LaborNet and WomensNet. The IGC, in turn, is linked to the Association for Progressive Communication (APC), and together, they encompass over 13,000 members and link up with over 30,000 people and organisations in over 130 countries. Obviously not all the civic and political actors in the cyber-realm are politically progressive, but the point is that there is a vast amount of socially and politically relevant communication and information sharing taking place in cyberspace, and journalism cannot remain unaffected by this.

In fact, the information sharing going on in cyberspace tends to increasingly bypass the classical role of journalism. The hierarchical, top-down mass communication model of journalism is being challenged in this new media environment. These elite citizens are more and more circumventing the packaging of journalism as stories and retrieve — and produce — information for themselves, thus "eliminating the middleman." Who is and who is not a journalist in this context may not always be so clear in the years ahead, as a variety of information functions arise to sort, sift and funnel data electronically. The boundaries between journalism and non-journalism in cyberspace may become even more problematic than it has become in the mass media.

This said, I would reiterate the point made earlier about classical journalism: though waning, it is not about to disappear, not even from cyberspace. It will rather accommodate itself to newer, as yet unsolidified forms and conventions. For example, the traditional story-telling functions of journalism, which help provide perspective and meaning to events and information, will persevere; even the elite strata of society need daily narratives to help orient themselves in the world. But the traditional story telling of journalism is being complemented by large flows of socially relevant, non-journalistic electronic information between people and organisations outside of journalism. We may envision the emergence of new forms of specialised "info-journalism," hybrids which reside somewhere between the traditional processed stories of classical journalism and raw, apparently random data. Looking to the future, we need to study the practices and circumstances of cyber-journalism both at the macro, institutional level as well as at the level of concrete daily practices. Escobar (1996), for example, offers a general approach to how we can begin to analyse some of the basic day to day practices in cyberspace, though he does not address journalism per se. Journalism is not in danger of becoming superfluous, but it will have to position itself in new ways in a changing media environment.

How it will do so will depend on a number of factors, and here we may as well end on another sober note. Historically, the occupational structures within journalism have evolved with new technologies and economic realities. It remains to be seen whether cyber-journalism will strengthen what Hanno Hardt (1996) calls the "deskilling" of journalists. As journalism and in particular cyber-journalism becomes incorporated within the mega transnational information industries, the question becomes to what extent these institutions will foster the journalistic tradition. The technical possibilities now available to journalists have to be backed up by resources to take advantage of them. For example, if it is deemed important that journalists and/or news

organisations take seriously the feedback they get from the public, it requires an allocation of funds to ensure that this feedback is collected, summarised, analysed, and not least, responded to. Such priorities can only derive from a strong commitment to journalistic enterprise.

The political economy of the emerging global media situation increasingly puts journalism on par with other forms of "information" as a commodity (cf. Schiller 1996). It may be that journalists in the traditional sense will be increasingly replaced by newer, "info-librarians" or "cyber-gophers," evacuating the active, critical, and creative dimensions of journalism. In their recent book *Convergence*, Baldwin et al. (1996) discuss the continuing integration of media and communication on the global scale. They have, disappointingly, very little to say about journalism as such, but what they do say is unequivocal. In these corporations, the gatekeeping functions of information distribution "will come into the hands of business people and manages who have only a lay person's exposure to the traditions and ethics of journalism" (Baldwin et al. 1996, 397). The culture of journalism, with its critical watchdog functions and its protection of freedom of expression, is not the culture of these institutions. The future of cyber-journalism is only in part in the hands of cyber-journalists. Moreover, we must not lose sight of the basic sociology of these developments: cyberspace will remain the privilege of a small segment of insider netizens and powerful institutions, while the majority of citizens will remain outsiders to cyberspace and will watch increasingly sensationalist TV news and read the tabloid press. The health of the public sphere — democracy generally — cannot be taken for granted in such a situation. If we can readily discount cyber-euphoria, the challenge still remains how we will avoid digital dystopia.

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