



UNIVERSITY OF LEEDS

This is a repository copy of *Digital Radio and the Diminution of the Public Sphere*.

White Rose Research Online URL for this paper:

<http://eprints.whiterose.ac.uk/92928/>

Version: Accepted Version

Book Section:

Lax, S orcid.org/0000-0003-3469-1594 (2007) Digital Radio and the Diminution of the Public Sphere. In: Butsch, R, (ed.) Media and Public Spheres. Palgrave , pp. 109-121. ISBN 9780230007215

<https://doi.org/10.1057/9780230206359>

© 2007, selection and editorial matter, Richard Butsch. © 2007, chapters, their authors. This is an author produced version of a book chapter published in Media and Public Spheres. Uploaded in accordance with the publisher's self-archiving policy.

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

Digital radio and the diminution of the public sphere

Stephen Lax.

For *Media and the Public Sphere*, editor Richard Butsch

Introduction

It is more than 70 years since Bertolt Brecht lamented that radio was ‘one-sided when it should be two-sided’, urging instead that it should ‘let the listener speak as well as hear ... radio should step out of the supply business and organise its listeners as suppliers’ (Brecht 2000 [1932]: 42). While short on detail, Brecht argued that more citizens could be involved in the transmission side of radio. Instead, governments and broadcasters around the world have sought effectively to restrict access to radio in favour of the ubiquitous one-way model of broadcaster and listener. ‘Radio’ for most people means the reception of sounds of various natures, the creation and selection of which are made by someone else.

Nevertheless, radio remains one of the more accessible platforms for those who believe in a more open, participatory and accountable media. While, in common with the press and television, radio tends to be dominated around the world by commercial interest (increasingly concentrated in the hands of larger, transnational media corporations) in combination with some level of public interest (public service broadcasting for example), there are a number of different ways in which it can be argued that radio allows for greater public participation. For instance, talkback radio or the phone-in has been a feature for several decades – the first phone-in in the UK was heard in Nottingham in 1968 (Crisell 2002: 147) – and is now established as a staple part of the radio diet. Here, we hear, however briefly, the voices and views of sections of the audience rarely represented amongst regular presenters and programme makers. Douglas suggests phone-ins act as ‘electronic surrogates for the town common, the village square, the meeting hall, the coffeehouse...’ (2004: 285). To some extent, then, this addresses Brecht’s goal of ‘turning listeners into suppliers’, but editorial control clearly remains with the radio station and Hendy cites evidence for the various ways in which the phone-in falls short of democratic ideals (Hendy 2000: 205-9). A more explicit form of participation is in the direct production of radio. At its simplest, this might be the individual (and friends) broadcasting on an ad-hoc basis, either illegally as a pirate station or legally like some of the low-power FM (LPFM) stations in the US. On a larger scale, however, it also includes small radio stations run by groups of people with little or no commercial interest but with some broad aim of fostering inclusivity and social gain – usually designated community radio, these stations operate to varying extents in many countries. Here we might approach more closely a public sphere in radio. While commercial stations are inevitably compromised by their need to attract advertisers and generate profits, and public service broadcasters in receipt of substantial public funding must similarly compete for substantial audience share, small community stations can operate with greater freedom from these constraints. By deliberately aiming to include a wide range of citizens’ views, and involving them directly in production and editorial decisions, this sector of radio has been shown to give voice to groups frequently marginalised by ‘mainstream’ radio (Lewis and Booth 1989; Jankowski et al. 1992). O’Connor’s account of the miners’ radio stations in Bolivia, for example, demonstrates the vital political role of these small stations (O’Connor 2004).

However, community radio has generally operated at the margins of broadcasting. In the United States, the LPFM movement has found itself squeezed by the commercial interests of the National Association of Broadcasters (Riisman del 2002; Opel 2004). In the UK, radio broadcasting remained dominated for the first five decades of its existence by a commitment to concepts of public and universal service, with little space (including frequency space) allocated for alternative voices. By the 1970s however, following campaigning by a number of activists, community radio plans were at an advanced stage, but a change in political climate resulted in commercial radio interests being prioritised. Once again, proponents of a more accessible radio found themselves squeezed out by the insatiable appetites of the more powerful commercial and public service lobbies.

The launch of digital radio in the 1990s presented new possibilities. The transmission of digital signals to carry the audio content made much more efficient use of the available spectrum and meant that there would be space for a vastly increased number of stations. One barrier to the development of greater diversity in radio, the unequal distribution of scarce spectrum, had thus been lowered. It would seem then that the coming of digital radio would have the potential to open up the airwaves and enhance radio's contribution to the public sphere. However, this emerges at a time when governments around the world are pursuing neoliberal economic agendas, and the idea that new radio spectrum should be seen as a public good rather than a commercial resource is seen as out-of-date. The experience in the UK, the country where digital radio is most developed, suggests that any opportunity to develop radio's contribution to a digital public sphere is being neglected in favour of commercial interest.

Digital radio technology

Radio production has taken advantage of digital technologies for many years now, but it is only recently that the transmission and reception of radio signals have begun to move from analogue to digital. This slow progress is in marked contrast to the relatively widespread adoption of, or certainly awareness of, digital television. A further contrast with digital television is the development of a number of different standards for the digital radio system. A brief description of the different forms is essential to an understanding of the development of digital radio policy in different parts of the world.

As with television, digital radio can be delivered over any mass media platform: through cable systems, via satellite or over the air using terrestrial transmissions. In the analogue world, the latter is the most familiar and universally-available means of listening to radio. A simple technology, it works with cheap receivers and functions on the move with portable equipment, yet can also deliver high quality audio to state-of-the-art receivers as part of a hi-fi system. For digital technology to replace analogue, it must deliver similar audio quality or better, and it must also include the key radio attribute of portability and mobility, and so terrestrial digital radio systems have received most attention and development. In contrast, cable and satellite radio are generally received on fixed systems, usually part of a cable or satellite television set up¹. It is thus the terrestrial digital radio services that the industry anticipates will most precisely replace analogue radio.

¹ There are two exceptions: first, two digital satellite subscription services operate in the US, Sirius and XM, generally received on in-car sets; secondly, World Space transmits subscription radio services from satellites across Africa, Europe and Asia to portable radio sets. Currently, both of these satellite radio systems remain niche services, remain unprofitable and do not compare in numbers with terrestrial radio as mass media.

Terrestrial digital radio is currently dominated by one format, known generally as DAB (for Digital Audio Broadcasting). Developed in Europe from the mid-1980s, DAB was intended as a replacement for analogue FM radio, and domestic broadcasts began in a number of countries in 1995. While initial geographical coverage was low and receivers expensive and limited in availability (in much the same way as the launch of any new broadcasting system), ten years later DAB radio services were operating in 28 countries within and outside Europe (World DAB 2005). However, the level of development is uneven: in some of these countries services are advanced, while in others early developments have stalled. For example, in the UK over 85 per cent of the population can receive DAB, including new digital-only public and commercial stations. Meanwhile, neighbouring Ireland has not progressed services beyond Dublin-based trials. The adoption of digital radio receivers shows a corresponding variability: the UK is again the leader, with over two million receivers sold by the end of 2005, while in many other countries (including some with significant DAB coverage), take up has been minimal.

The relatively slow adoption of DAB (even in the UK the receivers sold account for barely three per cent of all radio receivers) is complicated by two further developments: the adoption by the US of a different digital radio standard, the in-band on channel (IBOC) system branded as HD radio, and the introduction of an international digital radio system, Digital Radio Mondiale (DRM). Both are completely different from the DAB system and can be seen as competing formats. While there remain doubts about IBOC's technical quality in comparison with DAB, others claim its adoption is opportunistic, consolidating the position of large radio groups in, effectively, forcing smaller stations including LPFM stations off the air (Ala-Fossi and Stavitsky 2003: 71); and although both the DRM Consortium and the World DAB Forum describe their two systems as complementary (DRM 2005), the emergence of alternatives means the future direction of digital radio's development remains uncertain.

Nevertheless, the DAB system is demonstrably operational while others are still emerging from the trial stage and, of all the countries operating DAB services, the UK has the highest levels of broadcasting and listenership. It serves therefore as a useful illustration of the ways in which the adoption of digital radio reflects media policy and has implications for radio's role in the development of a public sphere.

Digital radio in the UK

DAB transmissions began in 1995 in the UK when the BBC broadcast its five existing domestic services from a small number of DAB transmitters across the country. Commercial radio stations began digital transmissions in 1999. DAB digital radio works differently from analogue in transmitting signals in wide frequency bands known as multiplexes. A multiplex carries digitally coded audio data for a number of radio stations simultaneously, typically between five and ten. The data is tagged so that a radio receiver, 'tuned' to a station, extracts and reassembles the data for the audio stream of that particular station. Thus, whereas with analogue radio the broadcaster is responsible for the organisation of its station's transmission, with the introduction of DAB the radio station became separated from the transmission of its service, and transmission of a collection of radio services became the responsibility of the operators of the DAB multiplex. In fact, the first UK multiplex was awarded to the BBC for transmission of its own services, so the relationship between broadcaster and transmission remained, but in the commercial radio sector, individual radio stations have had to make

arrangements with the multiplex operator for the carriage of their services. With the exception of the BBC multiplex, all licences to operate DAB multiplexes were awarded to commercial companies. These licences were advertised by the regulator at that time, the Radio Authority, and a competitive bidding process determined the outcome of the award. The first award, for a national commercial multiplex, was awarded in 1998 to the sole applicant, Digital One, which in turn contracted with the three existing national analogue commercial stations to transmit their services, and carried an additional seven new services (later reduced to five). Subsequently a series of 46 local and regional multiplex licences have been awarded to other commercial companies, in most cases comprising consortia of the existing large analogue radio groups. The arrangement of these local and regional multiplexes means that in more than half of the UK, a typical DAB listener is within range of two local multiplexes in addition to the two national multiplexes, giving access to 35 or more radio stations (Thomas 2002). Elsewhere, the number of multiplexes received might be fewer, and by the end of 2004 there remained 14 per cent of the population which was unable to receive any DAB signals at all (Ofcom 2004a: 102-3).

The consequence of these developments is that many radio listeners in the UK now have access to a number of new radio services, twice as many or more compared with analogue, provided of course they are within range of the full complement of national and local multiplexes. A number of these new stations are available only on digital radio – three BBC services began in 2002, and by the end of 2004 there were also 32 digital-only commercial stations (though most of these are available only in certain areas). There are also a number of existing local analogue stations which are broadcast on digital multiplexes in new areas – two BBC services (the World Service and Asian Network) available regionally on analogue are transmitted nationally on digital, while 14 commercial local stations broadcast beyond their analogue locales (Ofcom 2004a: 102). To give these numbers some context, the 35 digital-only stations comprise a small proportion of the total of 177 different radio stations on the DAB system. Hence, although the introduction of the DAB digital radio system has brought with it a substantial increase in capacity, that extra capacity is predominantly filled with existing commercial stations and a smaller number of additional public service stations. To date then, there is little sign of radical innovation following the introduction of digital radio and instead a listener is likely to notice two significant changes: the reception of ‘local’ radio stations from another part of the country (for instance, London-based stations such as XFM are carried on numerous local multiplexes across the UK); and a small number of new stations solely available on digital radio.

The first of these developments represents the transformation of existing local commercial stations into ‘quasi-national’ stations and, while much advertising on these stations is not geographically-specific, it can be a little disconcerting to hear notices of events such as concerts taking place hundreds of miles away. This dislocation is further compounded by the absence of a number of existing, genuinely-local analogue stations from their local DAB multiplex. Fewer than half, 45 per cent, of existing local analogue commercial stations were being carried on their local DAB service by the end of 2004, principally because of the high costs of carriage charged by the multiplex operators (Ofcom 2004a: 101, 116). In particular, the smaller commercial stations are least likely to be carried on DAB. Hence, the ‘most local’ of a listener’s local commercial services generally remain available only on analogue radio. In this way, the introduction of DAB brings with it a tendency away from local and towards regional or (quasi-) national radio.

What of the new, digital-only stations? Of the eight new stations available nationally, three are provided by the BBC and five by commercial operator Digital One. Five of the eight are familiar, mainstream formats (chart, adult, easy listening music); two are spoken word (audio books, drama serials, archive comedy programmes), and the last is an urban/black music station. Among the new 'local' digital-only stations, there are a number of specialist or niche stations, such as a country music station or stations for minority ethnic groups. Nevertheless there is still a high degree of mainstream formatting, and almost all digital-only stations are in fact networked across a number of local multiplexes and so do not in fact pretend towards serving any particular locale. In many cases there is also a high degree of computer-automated production and the often lifeless, programmed output has caused one production company director to describe them as 'juke-box automatons whose pre-recorded presenters make Smashie and Nicie sound genuine' (Ackerman 2005)². Hence, while the digital-only stations alone suggest some movement towards specialist programming, given their small numbers in comparison with simulcasts of existing analogue stations, there is little extra diversity to be found on digital radio. Indeed, as the new UK radio regulator the Office of Communications, or Ofcom, points out, the expansion of capacity has not encouraged new entrants to the radio market: of the 167 commercial stations on DAB at the end of 2004, 'only 12 of these are owned by companies which do not have analogue radio interests. And of those 12 brands, many are hospital, community or student services which were already broadcasting prior to the advent of DAB.' The report adds that a number of independently-owned, specialist DAB stations have gone out of business or moved off the DAB platform (Ofcom 2004a: 116).

It seems clear that there is no easy or automatic connection between an expansion in supply of spectrum and an enhanced public sphere. Even without insisting upon Brecht's demand that the audience should be more involved with the production of radio, it is not possible to argue that digital radio offers its audience a significantly wider range of voices than before. If digitisation is to enhance radio's role in the public sphere, we should expect to see a number of developments. The additional capacity for stations should at the least allow a greater diversity of radio formats where maximising audience size would not be the principal determining factor in programme planning, as radio would seek an expanded role independent from commercial interest. In fact the introduction of digital radio does make it possible to approach more closely Brecht's ideal: digital production is relatively cheap and easy to use, and communications networks permit material to be readily shared; digital transmission arrangements within a DAB multiplex are far more flexible than analogue, allowing different numbers of stations to be carried at different times of the day, so that stations need not commit to full-time broadcasting. It would be straightforward to insist that small community stations should have a right of access on a non-commercial basis to their local multiplex in the same way that 'must carry' rules insist that the commercial multiplex operators carry their local public BBC service. Thus radio could become more accessible to a wider range of citizens, who would be able to contribute to debates within their communities. The capacity and flexibility of digital radio would in this way present a flourishing of diverse voices, from very small communities to larger groups of citizens. In fact, with the difficulties of transition for smaller, very local and community stations onto DAB, and the tendency to network hitherto local stations into quasi-national stations, it would be more accurate to argue that digital radio offers a less local, more networked and centralised service – if anything, then, a diminution of the public sphere.

² Smashie and Nicie were two radio DJ caricatures noted for their contrived sincerity, first performed by comedians Harry Enfield and Paul Whitehouse on BBC TV in 1994 and now part of radio folklore.

Commercial radio and DAB

The UK is unusual in having strong involvement from the commercial radio sector in its development of DAB from the outset. The 1996 Broadcasting Act set out how the regulator, then the Radio Authority, would advertise and licence multiplex frequencies, following allocations of frequency blocks at the Wiesbaden conference in 1995. The government decision, as we have seen, was that all but one of the seven frequency blocks available in the UK would be used for commercial radio, and that licences to operate those multiplexes would themselves be allocated to commercial companies. Thus, the Act introduced a new tier in the structure of UK radio regulation, the multiplex operators. Described by the Radio Authority itself as ‘gatekeepers’ (Radio Authority 2002: 19), the multiplex operators would contract with radio stations to carry their services.

The level of interest in DAB shown by commercial radio reflects the rapid development of that sector in the UK. While commercial radio began in the late 1970s with a number of local stations around the UK, their licences carried a significant level of public service responsibility (in a similar way to the regulations on commercial television). Consequently, many stations struggled financially and it wasn’t until the passage of the 1990 Broadcasting Act, which sought to deregulate commercial radio and expand the number of stations, that commercial radio became a significant part of the national radio landscape. While the number of commercial stations had only reached 50 by the mid-1980s, it had reached 150 ten years later; that growth has not slackened since and by the end of 2004 there were 275 commercial stations, including three national networks (Hendy 2000: 25; Ofcom 2004a: 26). In 1995 commercial radio took a larger share of the audience than the BBC for the first time and has continued to compete at around that level since (Crisell 2002: 249). Hence, the emergence of a new digital system of radio broadcasting, with the potential for a dramatic expansion in capacity, came at a time which was auspicious for commercial radio companies. Further deregulation followed in the 1996 Broadcasting Act and the 2003 Communications Act. Commenting on the plans before the passage of the 2003 Act, the chief executive of the Commercial Radio Companies Association (CRCA) commented: ‘This is good news for local radio. The government has done much to ensure an environment in which commercial radio can prosper’ (Brown 2002); and after the act was passed, he spelt out the commercial companies’ role: ‘CRCA successfully argued for consolidation of local radio to be permitted within the Communications Act and the government agreed that consolidation would be good for listeners’ (Brown 2004). In truth, consolidation has been underway for many years: four or five large companies have come to dominate commercial radio – and in 2005, two of those, Capital and GWR, merged to form the largest single UK radio group, while Emap acquired Scottish Radio Holdings later in the same year³. The tendency is for smaller independently-owned radio stations to be bought up by the larger groups within a few years of their being awarded a licence. Consolidation on this scale, increasingly permitted under successive legislative acts, leads to what Habermas refers to as the refeudalisation of the public sphere (Habermas 2001 [1974]), large organisations increasing their control of, in this case, broadcast media. This process is not unique to the UK: the increasing dominance of commercial radio in many countries’ broadcasting landscapes has been widely noted and, usually, lamented. Commenting on US commercial radio since the 1996 Telecommunications Act, McChesney states (2000: 76):

³ The big four are the newly merged GCap Media, Emap and Chrysalis, followed by The Wireless Group (itself acquired in 2005 by Ulster TV). Between them, these own stations comprising three-quarters of total commercial radio listening, and a similar share of total radio advertising revenue (data from Ofcom 2004a: 29).

Relative to television and other media technologies, radio is inexpensive for both broadcasters and consumers. It is also ideally suited for local control and community service. Yet radio has been transformed into an engine for superprofits – with greater returns than any other media sector – for a small handful of firms so that they can convert radio broadcasting into the most efficient conduit possible for advertising. . . . On Wall Street, the corporate consolidation of radio is praised as a smash success, but by any other standard this brave new world is an abject failure.

McChesney explains that in the years following the Act, over half of the 11,000 US stations changed hands, and there were over 1,000 mergers within the industry (2000: 75). Owning a large number of radio stations means costs can be cut by increased networking of programmes and sharing of presenters, and the local nature of the station is diminished. Instead we hear increasingly familiar formats wherever in the country we happen to be listening, and frequently very similar music selections. A significant benefit of this amassing of local stations from the owners' point of view is that they can present themselves to advertisers as de facto national broadcasters, and thus become much more attractive. The share of UK radio's advertising revenue that comes from national rather than local advertising has almost doubled since 1992, and now makes up 70 per cent of all radio advertising revenue (Indepen 2004: 13-14).

The pressure to concentrate ownership has the effect of commercial stations leaving out entire segments of the audience. Even when the licensing bodies strive for an element of pluralism and diversity in the awarding process, once bought up by the big radio groups, many stations' formats change so that what is broadcast often bears little resemblance to the proposals that won the licence in the first place (a noted example is the UK's Jazz FM: it played less and less jazz over the years in favour of mainstream music until in 2005 it gave up the pretence and rebranded as Smooth FM). Thus, despite an obligation on the regulator to encourage the provision of diversity, the experience of commercial analogue radio in the UK is a concentration on mainstream formats (Barnard 2000: 56-65; Hendy 2000: 28-41).

The tendency towards less regulation of the analogue commercial sector has been extended in digital radio. The clearest and most significant change, noted above, was the creation of a commercial gatekeeping role on the part of the multiplex operators, whereas in analogue radio the gatekeeper is the government radio regulator itself. In its interpretation of the 1996 Broadcasting Act, the Radio Authority illustrated how its role had diminished (Radio Authority 2001: 21):

...the Authority is not empowered to specify the types or numbers of digital sound programme or additional services which it expects to be provided on a multiplex. . . .decisions about the choice and nature of sound programme and additional service providers are for the multiplex licence applicant to make.

These new gatekeepers are in fact the same companies which already dominate analogue radio. All 47 commercial digital multiplex licences have been awarded to one of the big five (now four) commercial radio companies, or consortia in which one or more of the four have a controlling interest. To illustrate the degree of concentration, the merger of Capital Radio and GWR left the resulting GCap Media in control of 26 of the 47 multiplexes across the UK.

Hence we sense, again, that commercial radio appears to have flourished in a deregulating market, a deregulation process which has been accelerated in the digital sector. There is little evidence of an increase in diversity and access to the digital airwaves on the part of the smaller broadcasters that usually seek to reflect the views and concerns of their locality and are thus often more accountable to their immediate community. Instead we see a clear indication that the additional capacity delivered by digital radio is seen principally as a

commercial resource rather than a public good. If we examine the content of the DAB multiplexes in a little more detail, we find further evidence for the dominance of commercial interest. Two examples illustrate the trend.

Firstly, one of the many claims made for digital radio has been that it would deliver superior, 'CD-like' sound quality and indeed there is some justification for this (Lax 2003: 338-40). But there is a direct relationship between the quality of the sound of a digital station and the 'bit-rate' allocated to it: the more bits of audio data used per second in transmitting a particular station, the better the quality of the sound. However the capacity of the multiplex is finite, and giving one station a higher bit rate means there is less capacity for additional stations. Hence there is a tension between quality and quantity (number of stations). The consensus amongst DAB technicians has been that a rate of 256 kilobits per second (kbit/s) would provide best quality audio for stereo music (allowing for five or six stations per multiplex), while 192 kbit/s would be better than FM-quality (Hunter & Norfolk 1995; Ambikairajah et al. 1997). The Radio Authority in fact specified a minimum of 128 kbit/s, but with a caveat: 'It is stressed, however, that these are minima. The Authority expects that applicants will wish to balance the benefits of the high audio quality of digital radio at high bit rates against the capacity to include a larger number of programme services' (Radio Authority 2001: 25). In other words, while some programmes would be transmitted at minimum rates, higher rates for some kinds of programming would bring the benefits of higher audio quality to the listener. However, now the multiplexes have begun transmission we find most stations operating at the minimum, 128 kbit/s for stereo music, while only one operates at higher than 160kbit/s, thereby reaching the 'better than FM' threshold. The multiplex operators have gone against the Radio Authority's recommendation and have prioritised maximising the number of stations over sound quality.

A second example is the use of digital radio capacity for delivery of non-audio data. Just as the digital data carried on a radio multiplex can deliver audio information, it can also deliver other kinds of data. So DAB receivers can display text such as station and programme names, scrolling messages describing programme content and so on; they can also display images (music CD covers for instance). This non-audio data need not of course be related at all to the radio content, but could include a teletext-like service such as news, sport or business information. The DAB multiplexes then have the capacity for delivery of both conventional radio and also potentially revenue-earning data services. Once again, there is a possible tension between using the multiplex capacity for high quality audio and for so-called non-audio-related additional services, and the 1996 Broadcasting Act imposed a limit of ten per cent of multiplex capacity to be used for this type of data service. This limit was doubled by the Secretary of State in 1998, so that one fifth of the multiplex capacity can now be used for data unrelated to radio.

Hence we see that commercial rather than public service priorities are evident in the use of the new digital radio spectrum: the use of minimal bit rates in order to maximise the number of stations carried (and maximise the consequent appeal to advertisers); and the potential use of a significant proportion of the capacity for non-radio data services. More recently, Ofcom proposed relaxing both of these limits on how a multiplex operator might use its capacity (Ofcom 2004a: 141-4). In particular, Ofcom suggests that the specification of minimum bit rates for radio services should be replaced by a more subjective code of practice on quality statements, a relaxation which would allow further increase in the number of stations carried on each multiplex. The second change considered by Ofcom is to increase the current 20 per cent limit on the amount of the multiplex capacity which may be allocated to non-radio data

services. Ofcom's position on digital radio is one which stresses the importance of the market in deciding how radio spectrum should be used. Indeed, it states this explicitly: in considering the best way of licensing any future radio spectrum, it states, 'Given Ofcom's preference for allowing the market to decide upon the best use of the spectrum, we are minded to allocate the frequency blocks ... under the Wireless Telegraphy Act, without the need for a [more restrictive] Broadcasting Act licence' (Ofcom 2004a: 142). Elsewhere in the same document, it explains how an increase in supply of spectrum means the market can more readily be relied upon: 'The general principle ... is that as spectrum constraints lessen, the need for regulation decreases, as the market provides ever wider choice. It could be argued that, as digital take-up grows, the need for regulation on analogue platforms will decrease, as listeners can experience the wider choice available on all platforms' (Ofcom 2004a: 57).

Access to digital radio

Digital radio is not a free market as the entry costs are high. The digital carriage costs charged by the multiplex operators are significantly greater than a station's comparable analogue transmission costs, while for new entrants there are also the additional station start up costs. Ofcom does recognise this level of 'market failure' and acknowledges a need therefore for some degree of regulation, but the pattern of services available on DAB, and in particular the absence of a significant number of new, independent and innovative programming services suggests that the 'market plus minimal regulation' formula currently operating is not working. Ofcom itself has no proposals as to how to find space on DAB for small commercial and community stations (Ofcom 2004a: 141). While costs remain the biggest hurdle facing such stations (and there is no regulatory mechanism for subsidising the costs to these stations), they face the additional difficulty of the design of the DAB transmission structure. In the initial planning of DAB multiplexes, the regulators did not consider the increasing number of smaller commercial stations in the UK, and certainly did not acknowledge the representations made by the community radio lobby (Buckley 1995; Olon 2002). The geographical size of the multiplex coverage areas, modelled on the existing larger commercial and public service analogue stations, far exceeds that of the existing and planned smaller analogue stations, which would find themselves broadcasting in regions beyond their area of interest. For example, in Holland, proposed digital coverage areas for that country's almost 300 analogue community radio stations mean that each municipality's station, intended to serve just that locality (as it does on analogue radio) would be extended to cover perhaps another two areas. Putting this the other way round, with DAB each municipality would be served by two or three community stations, which would therefore compete with each other for revenue (de Witt 2005). Further, the development of the multiplex system favours broadcasting groups which own or run a number of stations, whether public sector (like the BBC) or commercial in nature. For independent, single station organisations, negotiations with the multiplex operating gatekeepers can raise issues of fair access, with some concern that as owners of radio stations themselves, multiplex operators might create difficulties in making space for what they see as competing services (Trefgarne 2001; Ofcom 2004b).

These difficulties are brought to the fore by the emergence in UK analogue radio, after many decades, of a new tier of community radio stations. Following pilot licences granted to twelve stations in 2002, Ofcom invited applications for new licences across the UK and by the closing date in December 2004 had received 192 applications, prompting its chief executive to note that this demonstrated 'considerable enthusiasm for community radio in this country' (Carter 2004). Covering a diverse range of communities of interest and a similarly wide range

of geographical areas, and with limits on the amount of advertising revenue allowed, 84 stations had been licensed by February 2006 representing a significant new feature of the radio landscape. Here, with licences requiring these stations to generate social gain, we may expect some contribution to a radio public sphere. Yet for these new radio players digital radio is of little interest – since the announcement of the community radio application process, the Community Media Association, to which most community radio applicants are affiliated, has received almost no queries about digital radio (Reid 2005).

The evidence from the development of radio in the UK over the past decade suggests that there is no strong link between the technology of radio and its contribution to the public interest. While the UK has traditionally divided its limited radio capacity between the competing and powerful interests of public service and commercial broadcasters, the emergence of a significant amount of new digital capacity has created space neither for new entrants from hitherto marginalised constituencies nor indeed for little else that might be heralded as particularly innovative. Where we might look for a new public sphere in radio (and we must wait and see whether funding and other challenges mean we will later have to qualify this description) is in old fashioned analogue radio. While many argue that there is an inevitability about the eventual transfer of all radio to digital platforms, few suggest that such a transformation is imminent (for all that the UK is the world leader in digital radio, ten years after its launch fewer than three per cent of its radio receivers were digital). Meanwhile, other digital radio technologies, perhaps most likely the DRM system, are likely to become more suited to small-scale radio, and the development of hybrid receivers capable of switching between the different digital systems might begin to make the migration possible. However, the evidence suggests there is no guarantee that new digital systems will allow the emergent forms of radio successfully to contribute to the public sphere. If the experience of the DAB system's development serves as an example, it would seem that commercial interests are likely to predominate in any consideration of allocating new capacity. The pattern of development of radio policy in the UK since the 1970s mirrors the rise of neoliberal economics in this country and elsewhere. If we wish to safeguard the future of digital radio for the public good, then just as we are witnessing a growing political and popular opposition to neoliberalism generally, a similar resistance must be raised to any diminution of the new radio public sphere.

References

- Ackerman, S. (2005) 'Where is the brave new digital world?' *Guardian* (Media section) 14 February, p.7.
- Ala-Fossi, M. and Stavitsky, A. (2003) 'Understanding IBOC: digital technology for analog economics.' *Journal of Radio Studies* 10(1) 63-79.
- Ambikairajah, E., David, A. and Wong, W. (1997) 'Auditory masking and MPEG-1 audio compression.' *Electronics and Communication Engineering Journal* August, 165-75.
- Barnard, S. (2000) *Studying Radio* London: Arnold.
- Brecht, B. (2000 [1932]) 'The radio as a communications apparatus.' In *Brecht on Film and Radio*, trans. and ed. M. Silberman, London: Methuen.
- Brown, P. (2002) 'Commercial radio welcomes communications bill announcement.' CRCA press release 14 November.
- Brown, P. (2004) 'CRCA welcomes new report which concludes: radio mergers are not substantial.' CRCA press release 10 February.
- Buckley, S. (1995) 'Digital audio broadcasting: the politics of a new technology.' *InteRadio* 6(1): 9.

- Carter, S. (2004) 'Ofcom receives 192 applications for community radio licences.' Ofcom press release 6 December.
- Crisell, A. (2002) *An Introductory History of British Broadcasting* 2nd edition. London: Routledge.
- de Witt, P. (2005) Interview with author, 26 February.
- Douglas, S. (2004) *Listening In: Radio and the American Imagination* Minneapolis: University of Minnesota Press
- DRM (2005) 'DRM votes to extend its system to 120 MHz.' DRM Consortium press release 10 March.
- Habermas, J. (2001) 'The public sphere' in M. Durham and D. Kellner (eds) *Media and Cultural Studies: Keywords* (Oxford: Blackwell). Originally published 1974.
- Hendy, D. (2000) *Radio in the Global Age* Cambridge: Polity.
- Hunter, M. and Norfolk, K. (1995) 'Digital Audio Broadcasting – how it works.' *International Broadcast Engineer Worldwide transmission supplement*, p.24.
- Indepen (2004) *Radio Mergers Are Not Substantial: the Impact of the Communications Act and the Enterprise Act on Radio Mergers* London: Indepen.
- Jankowski, N., Prehn, O. and Stappers, J. (eds) (1992) *The People's Voice: Local Radio and Television in Europe* London: John Libbey.
- Lax, S. (2003) 'The prospects for digital radio.' *Information, Communication & Society* 6(3) 326-49.
- Lewis, P. and Booth, J. (1989) *The Invisible Medium: Public, Commercial and Community Radio* Basingstoke: Macmillan.
- McChesney, R. (2000) *Rich Media, Poor Democracy: Communication Politics in Dubious Times* New York: New Press.
- O'Connor, A. (2004) *Community Radio in Bolivia: the Miners' Radio Stations* Lewiston, NY: Edwin Mellen.
- Ofcom (2004a) *Radio – Preparing for the Future. Phase 1: Developing a New Framework* London: Ofcom.
- Ofcom (2004b) 'Summary of Representation made during the review of Digital Radio.' *Radio – Preparing for the Future. Appendix C* London: Ofcom.
- Olon (2002) *EUREKA! Een oplossing voor digitale kleinschalige radio (Eureka! A solution for small-scale digital radio. In Dutch, with English language summary.)* Nijmegen: OLON (Dutch Federation of Local Public Broadcasters).
- Opel, A. (2004) *Microradio and the FCC* Westport, CT: Praeger.
- Radio Authority (2001) *Local Digital Radio Multiplex Service Licences. Notes of Guidance for Applicants* London: Radio Authority.
- Radio Authority (2002) *Briefing Paper* February. London: Radio Authority.
- Reid, D. (2005) Interview with author, 20 April.
- Riisman del, P. (2002) 'Radio by and for the public: the death and resurrection of low-power radio' in *Radio Reader: Essays in the Cultural History of Radio*, M. Hilmes and J. Loviglio (eds) New York: Routledge.
- Thomas, M. (2002) 'T-DAB: overcoming the spectrum planning and interference issues.' *EBU Technical Review* January.
- Trefgarne, G. (2001) 'GWR blocks Classic clone on digital.' *Daily Telegraph* 21 November.
- World DAB (2005) 'New wave of DAB legislation and developments worldwide.' *World DAB Forum* press release 14 April.