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Young People, New Media.

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BACKGROUND

We can no longer imagine leisure or the home without media and communication technologies. As the media environment changes around us, questions arise about the meaning, availability and use of media in daily life.

The LSE team was invited by a consortium of funders coordinated by the BSC to conduct a wide-ranging empirical project exploring the place of new forms of media in the lives of young people aged 6-17. The purpose was to update the work of Himmelweit et al (*Television and the Child*, 1958), a study of the introduction of television into British families.

Research aims

- To chart current *access and use* for new media at home (and, in less detail, at school).
- To provide a *comprehensive* account of domestic leisure and media activities.
- To *understand the meaning* of the changing media environment for children and parents.
- To map access to and uses of media in relation to *social inequalities* and *social exclusion*.
- To provide a *baseline* for media use against which to measure future changes.

Focus on the domestic screen

This report focuses on the domestic electronic screen, this being central to developments in domestic audiovisual, information and telecommunications services. Thus in ‘new media’, we include *cable/satellite television, the personal computer (PC), the CD-ROM, TV-linked games machines, the Internet and Email*

THE MEDIA IN CONTEXT

- Young people spend some 5 hours a day with media
 - Almost all 6-17 year olds (99%) watch *television* in their leisure time, and on average spend two and half hours almost every day in front of the screen.
 - Over four in every five watch *videos* (81%). On average, they spend just under two hours on two or three days a week doing so.
 - Two-thirds play *computer games* (64%), on average for just under an hour and a half on just over 3 days a week. A quarter of players will play daily.
 - most nine in ten (86%) listen to *music*, spending on average an hour and a half on five days a week (often while doing something else).
 - most over half (57%) read *books* that are not for school. On average they spend just under an hour reading on 3 to 4 days a week. A fair proportion of readers (30%), however, spend almost an hour every day.
 - A third (36%) use a *personal computer* (PC) not for games in their leisure time, on average spending an hour on two to three days a week.
 - One in five (19%) personally use the Internet somewhere (mostly in school). The majority of users (71%) do so once a month or less and the average time spent by those aged 9+ is just under an hour.
- Given the considerable amounts of time spent with media, especially screen media, we focus first on why children spend so much time with media

A combination of three factors seems to be involved - a lack of things to do in the area where they live, their parents' fears for their safety outside the home and the easy attractions of an increasingly personalised media environment inside the home.

1. Insufficient outdoor activities

- A substantial majority (66%) of children and young people aged 9-17 think there is not enough for them to do in the area where they live
 - The number dissatisfied with provision of outdoor leisure facilities rises sharply after the age of 11, when attendance at the many organised leisure activities outside the home (such as swimming lessons, Cubs, Brownies or dance lessons) tends to fall off.
 - Three-quarters (73%) aged 12-14 and as many as four in every five (80%) of those aged 15-17 are discontented with leisure alternatives outside the home. Where, they ask, are the affordable and accessible meeting places (cafés, parks, swimming pools, cinemas, skating rinks, youth clubs)?

- Of particular concern is the finding that this level of dissatisfaction is around double that expressed by *young people in other European countries*. For example in the UK 81% of young people aged 15-16 are dissatisfied with what is available for them in the area where they live, compared with only 61% in Sweden, 49% in the Netherlands, 43% in France, 34% in Germany, 21% in Switzerland, and as few as 1% in Spain.

2. Parental fears

- Parents are deeply concerned about their children's safety outside the home
 - Only 11% of parents say the streets where they live are 'very safe' for their child, compared with 56% thinking this about the neighbourhood where they were brought up.
 - Asked to 'think about their child and what is affecting his or her life nowadays', parents of children in every age bracket name the availability of illegal drugs and the child being victim of crime among their top three concerns.
 - Unsurprisingly therefore, 31% of parents say their child spends 'very little' or 'none' of their time outside the home or garden without adults around. Only 12% say this was the case for themselves at their child's age.
 - Girls, younger children and middle-class children spend less time playing or 'messing about outside'.

3. Media-rich homes

- Possibly by way of compensation, increasing numbers of young people are provided with a rich media environment at home
 - Nearly half of the homes with children in our sample have cable or satellite television (42%)¹. These offer channels dedicated to children and young people's favourite television genres - cartoons for the youngest, sport for the older boys and drama series and serials for older girls.
 - Children with access to cable or satellite *watch at least a quarter of an hour longer* each day. This increases to up to an hour extra each day for younger girls and boys in their early teens. (This seems not to be because of the wide choice of channels *per se* but because of interest in a few specific channels; hence they are no more likely to zap when viewing than are those with just terrestrial television.)
 - Overall around two-thirds of children and young people aged 6-17 have their own personal stereo (68%), television set (63%) and hi-fi (61%). A third (34%) have their own TV-linked games machine and two-thirds (67%) have access to one

¹ It should be noted that our survey data was gathered in 1997, since when some change is already to be expected. However our focus is on differences in availability *between media* and, within media, on the *differences in access of demographic subgroups*. Such social changes occur only gradually and the differentials we have noted are likely to be robust.

somewhere in the home. Almost every household with children (96%) has a VCR and 21% of children have their own.

- *By comparison with other European countries*, Britain leads in personal provision of screen entertainment media. The picture is particularly striking for the numbers of 6-7 year olds with a TV set in their bedroom. In the UK, 50% have their own set. This may be compared with 25% in Sweden, 21% in Spain, 17% in Germany, 16% in Switzerland and France, and only 12% in the Netherlands.
- British children also watch more television than children in other European countries. They watch up to half an hour more per day than in the Netherlands, Sweden and Spain, and as much as an hour per day more than in Germany, France and Switzerland.
- Yet young people prefer being out with their friends.

While media are inextricably part of children and young people's lives, they generally prefer to be outdoors in the company of friends rather than to gaze at a screen, unless they are tired or want to fill a gap between activities. Even the most popular media activity - watching television - is a second-best option, and is widely seen as what you do when you are bored and have nothing better to do.

- When asked for their top 3 choices for *,a really good day'*, 41% chose going to the cinema, 39% wanted to see friends and 35% would play sport, and only 14% chose watching television.
- When asked for the 3 things they are most likely *,to end up doing on a really boring day'*, 41% say they would watch television, 28% would read a book and 22% would watch a video.

The message from children and their parents to policy makers is clear - improve the provision of safe leisure alternatives for young people, particularly teenagers, outside the home.

THE MEDIA MIX

Combining media in daily life

The overall impression from talking to children and young people around the country was of lively and resourceful young people who are putting considerable energies into actively constructing and sustaining a varied leisure mix which spans both media and face-to-face interaction, indoor and outdoor activities, time with friends, time with family and time alone. In this report we attempt to map, and understand, how they combine media in daily life.

New media are adding to the media mix, but appear to be displacing non-media activities, more than other media. The more time children spend with one medium, the more they tend to spend with others.

There is, however, one significant exception: those who spend longer reading books watch less television, and vice versa.

In general, however, increased use of one medium does not imply decreased use of others, suggesting that any rise in overall time spent with the media is likely to have been bought at the expense of non-media time.

In addition, new media may be stimulating older forms of media to become more specialised, now they have to compete in a diversifying media environment.

Given a diversifying media environment, our key questions concern:

- the *mix* of media available to young people;
- the *match* between different young people and particular combinations of media;
- the *meanings* and patterns of *use* associated with different media ,styles’.

In what follows, we report key findings according to five media categories. We begin with the two which centre on the *domestic screen - screen entertainment media (TV, VCR, games machine, etc) and information technology (IT)*. Given our stress on understanding screen media in context, we compare these with three further categories of media: *print, music media and the telephone*.

To explore the link between media and lifestyle, we discuss how each media category is associated with particular *media styles (defined below)*.

Depending on access, children and young people generate their own styles of media use

- , *Screen entertainment fans’* spend considerably more than average amounts of time watching television and videos and playing computer games and very little time with books.
- , *Specialists’* spend more than average amounts of time with one particular medium. We identified three kinds of *specialists: ,book lovers’, ,PC fans’ and ,music lovers’*.

- , *Traditionalists* spend the bulk of their time with ‘traditional’ media (television, music, books and magazines), very little with PCs and relatively little with computer games.
- , *Low media users* spend below average amounts of time with all media.

We discuss the characteristics and implications of each style in turn when we consider the five media categories.

SCREEN ENTERTAINMENT MEDIA (TV, video, computer games)

Meanings and uses

Television continues to dominate

While new media figure large on the public and policy agenda, television is retaining its importance in young people’s lives. When children are asked what medium they *would miss most*, television is named by more than three times as many as its nearest rival, the hi-fi. Further, it is striking that no matter what the style of media use, by far the largest proportion of time is spent watching television.

Even the groups who watch least television - book lovers and low media users - watch on average for around two hours per day (compared with the 39 minutes on average that book lovers spend reading).

Moreover those who play computer games also spend considerable amounts of time watching television.

Television’s dominance rests heavily on the breadth of gratifications it offers. By contrast, most media are commonly identified with only one, or at most two, of the five uses we asked about:

- *Books* and *PCs* are chosen ‘when you want to learn about something’, *music* ‘when you want to relax’ and the *telephone* ‘when you don’t want to feel left out’.
- *Computer games* are chosen ‘for excitement’ and ‘when you want to stop being bored’.
- *Television*, on the other hand, is either first or second choice in all of these situations apart from ‘when you want to learn about something’ - hardly a common leisure interest for most children.

Television is also a 'transparent' technology, one which is thought of primarily in terms of *content* rather than as a technology or consumer good

Indeed, the hardware of familiar media (e.g. television or video, radio or hi-fi), are often confused: children 'see through them' to their contents and do not focus on the means of delivery. By contrast, more recent media (Internet, Email) are often exciting, glamorous technologies but they still lack a content to which many children and young people can relate (see Information Technology).

The content of television programmes accommodates very different tastes

- *Favourites*. There is considerable diversity among children's favourite programmes. The most popular, a national soap opera (*EastEnders*) is named by only 18% of the sample.
- *Age*. The trajectory is from considerable diversity at the youngest age to rather less as children get older. At age 6-8, more than 1 in 3 children names a different programme. At age 15-17 the ratio has dropped below 1 in 4.
- *Gender*. The majority of girls (59%) name a soap or narrative series/serial as their favourite programme. Boys' choices are more varied: 27% name sport, 20% cartoons, 11% soap and 9% science fiction. They explain their preferences in terms of settings and characters which they see as being 'like me', or which have universal relevance.
- *Children's television*. Only a minority (24%) name a children's programme as their favourite: even at age 6-8 only just over half (58%) do so. In interviews, children commonly expressed themselves as wishing to be older than they are, and their media tastes reflect this desire.
- *National/Global*. Just over half (55%) of favourite programmes are British. This proportion increases as children get older, largely due to the popularity of British sport and national soaps.

However, most say they are unaware of, or not interested in, the fact that programmes are made elsewhere or are set in different national cultures, provided they are in English. This contrasts with their views of the *Internet* (see *Information Technology*) where the idea of transatlantic communication is key to its appeal.

Favourite types of computer game mirror content preferences for television programmes

Two types of computer game share top place - sports games and adventure games/quests, both named by around a quarter of games players overall. Preferences are

strongly gendered. Boys prefer sports games and fighting games, girls prefer adventure/quests, though these are also enjoyed by boys.

If the parallel between television drama and adventure/quests in computer games and between cartoons and fighting games is valid, it seems clear that the same content preferences drive the choice of both computer games and television programmes.

- For television, boys rank sport highest (27%), cartoons next (20%) and soaps third (11%), while girls reverse this ranking (soaps - 41%, cartoons - 10%, sport - 2%);
- For computer games, boys rank sport highest (35%), fighting games next (23%) and adventure/quests third (19%), while girls again reverse this ranking (adventure/quests - 35%, fighting - 23%, sport - 12%).

Access

High levels of ownership of screen entertainment media point to the dominance within the UK of a screen entertainment culture

- Nearly all households with children have a television and a video recorder, two thirds have a TV-linked games machine, and nearly half have cable or satellite television (see Table 1).
- Screen entertainment equipment is more expensive than all other types of media hardware with the exception of PCs, yet television sets are found in the majority, and TV-linked games machines and videos in sizeable minorities, of children's bedrooms (Table 1). This is presumably the result of pressure from children themselves, but also implies acquiescence from parents at no small financial cost.

Social class affects media in the home

The distribution of media in the home suggests a difference in middle-class and working-class media preferences.

Working-class families are *as or more* likely to own screen entertainment media. Middle-class families are more likely to own most other media.

- 72% of working-class, compared with only 61% of middle-class, families have a TV-linked games machine.
- The VCR is only slightly more common in middle-class families, cable and satellite is slightly more common in working-class families.

TABLE 1

% 6-17 year olds with screen entertainment media in the home by gender and social grade

	All	Gender		Social Grade	
		Boy	Girl	ABC1	C2DE
In Home					
Television set	100	99	100	100	100
Video recorder	96	96	96	98	94*
TV-linked games machine	67	78	56*	61	72*
Cable/satelite	42	44	39	39	44
In child's room					
Television set	63	69	57	54	71*
Video recorder	21	23	19	14	26*
TV-linked games machine	34	48	19*	27	39*
Cable/satelite	5	5	5	4	5

Note: * = statistically significant difference

– this picture for screen entertainment media contrasts with that for most other media. Middle-class families are more likely to have a telephone, a personal computer, a walkman, teletext, a mobile phone, books, a camcorder and the Internet (see *Information Technology and Summary table 6*).

If we look at what children have *in their own rooms*, differences in priorities are even clearer:

- 71% of working-class, compared with 54% of middle-class, children have their own television set.
- 39% have their own TV-linked games machine, compared with 27% of middle-class children.
- 26% have their own VCR, compared with 14% of middle-class children.

We learn something about the pleasures of a screen entertainment culture by examining its biggest fans.

, Screen entertainment fans'

Given the large numbers of children with their own screen entertainment media, the emergence of a group of 'screen entertainment' fans is no surprise. It is their enthusiasm for computer games which particularly marks this group out.

This style of media use is particularly popular amongst working-class boys and is most common between the ages of 12-14.

However most children play such games on relatively few days a week, making it a 'binge' activity, rather than something which dominates everyday life.

Sport is the main interest of screen-entertainment fans.

- Given a list of 14 interests, screen entertainment fans most often choose sport.
- Their favourite computer game is most likely to be a sports game.
- Their favourite TV programme is most likely to be a sports programme.
- They are most likely to say that being good at sport is what 'makes you popular with people your own age'.

This suggests that it is interest in content which is shaping their choice of media style, not an interest in the technologies *per se*. This conclusion is reinforced by other findings.

- Those few screen entertainment fans who have and use a PC at home are more likely to play games on it: 36% say they spend all or most of their time playing games on the PC, compared to 27% for other PC users.
- Despite their well-equipped bedrooms (78% have their own television set and 50% have their own TV-linked games machine) this group are amongst the least likely to spend a great deal of time in their own rooms.

Thus it would be a mistake to regard this as a group of isolated children: rather, their interests are typically shared with both friends and family.

The habits and preferences of this group undermine the idea that there is any simple or inevitable progression from an interest in computer games to an interest in more 'serious' or work-related PC use.

, Low media users'

Given the widespread interest in young people's media use it is worth noting that 1 in 5 of our sample stood out for making relatively little use of media across the board, when compared with the majority. We report on them here because television in fact plays a significant role in their lives.

Low media users are particularly likely to be young: two-thirds are under 12 years old and one third between 15-17 years old, while in the middle age range (12-14 years) we found no such users. They are not especially associated with either gender or social grade groupings. However, they do appear to have relatively more educated parents (though not higher income households). Predictably, they have relatively fewer media in their bedrooms.

Yet even for these children, television is important. Although they make rather little use of most media, television occupies a larger proportion of their 'media time' and they turn to it for both excitement and relaxation.

INFORMATION TECHNOLOGY

(PC, CD-ROM, Internet, Email)

While screen entertainment media play a key role in young people's leisure, it is computer-based media which span home and work, education and leisure, and it is these which are now beginning to gain a significant place in young people's lives.

Meanings

For many children 'computer' in everyday talk means not the PC but the games machine, making the primary association one of playing games

As the screen becomes ever more important, distinctions among media become blurred. While we have classified the TV-linked games machine above as screen entertainment - because that is how young people think of it and use it - they also think of it as a computer and this colours their reactions to PCs.

IT has a very positive image among young people

Children and young people are fascinated by new technologies. Unlike their parents, they are growing up with information technology and tend to be open-minded and enthusiastic in their talk about IT.

- They enjoy playing with futurist images, and would like an interactive television, a miniaturised hi-fi, a ,cyberwardrobe', even a ,virtual mum'.
- Many, particularly boys, are keen to talk about features of the technology itself, though they are often vague about their uses. Yet, technologies are made meaningful not through promotional hype but through the uses made of them.

Young people are comfortable with computers

- 92% say they feel comfortable using computers.
- 81% think they are exciting.
- 63% think it is more important for them to know about them than for their parents.
- 55% agree that people get left behind if they don't know about them.
- Only 34% think computers stop people from thinking for themselves.

Attitudes depend on their age and gender but do not differ by social grade

- Older teenagers less often think computers are exciting, but are more aware of the importance of computing for the job market.
- Boys are more comfortable using computers than girls and are more likely to find them exciting. There are no differences between the views of boys and girls on questions about the importance of computers in society.

Newer forms of IT (CD-ROM, Internet and Email) are often only hazily understood, being most salient as prestigious technological artefacts

- Overall, over half (57%) have personally used CD-ROMs.
- *Multimedia* computers are seen very positively. Young people are keenly aware of what is up- to-date and stylish and are highly interested in acquiring such media hardware, which confers status. The main image of the CD-ROM is 'fun'.
- Only around 1 in 5 (19%) have *used the Internet personally* and even fewer (6%) have used Email.
- Around three-quarters of young people have heard of the *Internet* (78%) and *Email* (73%). This varies from around a third of those aged 6-8 to almost everyone aged 15-17. Both are marginally less familiar to girls and significantly less familiar to working-class children.

The Internet inspires both positive and negative associations

Most commonly it is seen as an opportunity for communication and a source of information.

- The most positive association with the Internet is as a means of *communication* linking Britain with other countries, particularly the USA. It is seen as enabling a new kind of pen-pal relationship, combining the pleasures of such longdistance communication with the immediacy of the telephone.
- The major down side is the *cost*, much regretted by both young people and their parents.

Those few with extended experience of using the Internet are ambivalent.

- They report great excitement over the potential of this new medium, together with considerable difficulties in effectively accessing information and frustration with the quality of the information obtained.
- The most satisfied users seem to be not those using the Internet for school work, but those who are using it for game playing or Email.

Access to IT at home

Over half (53%) of 6-17 year olds have a PC in their home, and nearly one third have a multimedia computer (31%).

Very few as yet have a modem/Internet access (7%).

In families without a PC, parents seem likely to come under pressure to acquire one.

- When asked which media they most want to get for their next birthday, a PC was top of the list among those who do not already have one - 35% want this.

Social inequalities in access to IT are very evident

Children from middle-class families are much more likely than those from working-class backgrounds to have access at home (see Table 2).

- 68% of middle-class compared with 40% of working-class children have a PC of some kind at home.
- 46% of middle-class compared with 19% of working-class children have a multimedia computer at home.
- 14% of middle-class compared with only 2% of working-class children have access at home to the Internet.
- 6% of middle-class children have used the Internet at friends' or relatives' house compared with only 3% of workingclass children. While numbers are still small, the

trend suggests that middle-class children are also advantaged by the social circles to which they have access.

Middle-class parents, and parents of girls, prioritise sharing the PC over personal ownership by the child

Remarkably, while middle-class children are twice as likely to have a PC at home they are no more likely to have one in their bedroom (Table 2).

For gender, we see the reverse: while girls and boys are equally likely to have a PC at home, it is twice as likely to be put in a boy's bedroom than a girl's (16% compared with 8% of girls).

TABLE 2

Percentage with IT in the home, by gender and social grade

	All	Gender		Social Grade	
		Boy	Girl	ABC1	C2DE
In Home					
PC	53	50	56*	68	40*
CD-ROM	31	29	33	46	19*
Internet	7	8	7	14	2*
In Child's Room					
PC	12	16	8*	12	13
CD-ROM	4	5	2*	4	3
Internet	1	1	0	1	1

Note: * = statistically significant difference

In short, when they invest in a PC, working-class parents and parents of boys, regardless of class, are more likely to put the PC in the child's bedroom. Girls and middle-class children more often have to share the family PC (Table 3).

TABLE 3

Where PC owners put the PC by social grade within gender

	Social Grade		Social Grade within Gender			
	ABC1	C2DE	Boy		Girl	
			ABC1	C2DE	ABC1	C2DE
Child's room and elsewhere	9	16	15	17	4	15

Child's room only	11	23	15	33	7	13
Elsewhere only	80	62	69	50	90	72

Note: * = statistically significant difference

Across Europe, access to IT at home varies greatly

The UK figures are amongst the poorest

Multimedia computer

- In the UK only 27% of 15-16 year-olds have access to a PC with CD-ROM at home. Similar figures are found in France (21%) and Italy (34%). But in many other countries, figures are much higher.
- In Denmark 63% of 15-16 year-olds have a multimedia PC at home, as do 55% in Sweden, 52% in Switzerland, 51% in Spain, 50% in Germany, 48% in the Netherlands and 47% in Finland.

Internet

- In the UK 7% of 15-16 year-olds have Internet connections at home. Similarly small percentages are found in Italy (12%), Spain (11%), Germany (9%), and France (5%).
- Access is much more common in Scandinavian countries: Sweden (38%), Finland (30%) and Denmark (26%).

‘Info-rich and ‘info-poor’?

- In the UK the differentials between lower and higher social grade households in access to both multimedia computers and the Internet is much more marked than in the Scandinavian countries especially.

Use of IT at home

Access to IT need not imply use

Some children who have access to IT at home do not use it, either because they do not wish to do so, or they are not allowed to do so, or because the equipment does not work.

- 53% live in households where there is a PC but only 42% report using a PC at home.
- 31% have CD-ROM at home, but only 21% use it.
- 7% have an Internet link at home, and 4% say they ‘have ever’ used it.

Gender differences exist for both access and use

While we have found gender differences in personal IT provision (Table 2), there are also gender differences in the use of IT. It seems that the girls’ ambivalence to computers is not merely a matter of availability.

- Girls also spend less time with the PC when they do use it than boys. On average they use the PC at home for 2 rather than 3 days a week, and for about 20 minutes per day less than boys. -While overall 31% of children say they spend all or most of their time on the computer at home playing games, amongst boys (and primary school children) this rises to 40%.

No such differences were found for social grade.

Access and use of IT at school

Previous research has investigated use of computers at home or school. A strength of the present study is its comparison of access and use at both sites for the same sample of children and young people.

Twice as many children have access to IT at school as have it at home (Table 4)

- 88% use a PC at school compared with 42% who use one at home.
- 49% use a CD-ROM at school compared with only 21% who use one at home.
- 11% have used the Internet at school, while 6% have used it at home.

TABLE 4

Percentage who use IT at home and at school by gender, age and social grade

	All	Gender		Age		Social Grade	
		Boy	Girl	6-11	12-17	ABC1	C2DE
In Home							
PC	42	40	43	39	44*	58	30*
CD-ROM	21	22	21	18	24*	34	11*
Internet	4	5	3	2	6*	8	1
Email	2	2	1*	0	3*	4	0*
At School							
PC	88	90	87	88	89	88	89
CD-ROM	49	52	47	38	61*	48	50
Internet	11	12	9	4	19*	11	11
Email	2	2	2	1	4	2	2

Note: * = statistically significant difference

Inequalities in access at home are not reproduced at school

The inequalities of access to, and use of, IT at home are largely redressed by access at school (see Table 4).

- Working-class children in school are just as likely as middle-class children to use PCs, CD-ROMs, Internet or Email.
- Similarly, girls and boys receive broadly similar levels of exposure to these technologies at school.
- Secondary school pupils, however, are much more likely to use IT at school compared with primary school pupils.

Geographic region makes a difference. Scotland and Northern Ireland lag behind England and Wales in the provision of IT both in the home and at school. Moreover, children and young people living in the South have a clear advantage, particularly as regards home provision.

The PC is used differently at home and school

The extent to which the school seems to be redressing class and gender inequalities in IT access at home is belied by figures for frequency of use.

- On average pupils use the PC in school between 1 and 2 days a week only, compared with 2 to 3 days a week spent by home users.

The domestic PC is used more for fun, the school PC -, as one would expect, for work.

- At home the main use of the PC is for playing games (77%).
- In school the main use is for writing (74%).
- Around half (49%) use the PC at school for drawing or design and 39% use it for this at home.
- Just under a third use the PC in school for databases or spreadsheets (33%) and/or maths (31%). Around half that number use one at home for these purposes (17% and 14% respectively).
- Only around a third in both locations use PCs to look up information (30% in school and 33% at home).
- Computer programming is rare: only 12% in school and 7% at home use the PC for this purpose

For a discussion of teacher's views, and the relation between using a computer at home and at school, see later section, 'Computers in Education'.

, PC fans'

One of the six styles of media users - those we have called PC fans - spend the most time using a PC (not for games). These PC fans are unsurprisingly more likely to come from media-rich homes with a PC and to be middle-class. Interestingly, however, they are not more likely to be boys than girls.

- Around a quarter have a PC in their own room, although they are not more likely than others to spend large proportions of their time at home in their bedrooms.

- While, as we shall see, book lovers spend more than average amounts of time with PCs, this dual interest is not reciprocated by PC fans.
- While they read little, they spend a substantial amount of time with television and computer games, suggesting that they share a screen-based rather than a print-based media culture.
- Thus they prefer computer or video games for excitement and spend their money on these games.
- PC fans are much more likely to say that they concentrate on ,serious' PC use and they talk about the PC with friends.

Interactivity - ideals and reality

In the context of new media, 'interactivity' is the promised land. In addition to games applications, a dynamic, constructive and educational dialogue with the new information and communication technology has been envisaged.

Present reality does not yet match up to the dream

- *Video and computer games* have been spectacularly successful with boys (79% play). Girls are less enthusiastic: only 49% ever play.
- For *computers*, the great majority (88%) have used a *PC* in school, most commonly for word-processing.
- Fewer (42%) have used a *PC* at home, where the main use is to play games.
- Over half (57%) have used *CD-ROMs*, mainly at school, but access there is usually limited to once a week or less.
- So far only a small minority of children has had experience of using *Internet* (19%) or *email* (6%) in school, at home or elsewhere.
- Interactive applications involving the *television screen* (video-on-demand, on-screen banking and tele-shopping) are not yet generally available and have had virtually no impact on today's children, except as part of futuristic fantasies.

' Interactivity' is a good selling point and as such is often over-claimed, being used to cover very different kinds of user-machine interfaces

- *Video and computer games* typically elicit immersive user involvement and demand frequent, rapid responses.
- However response choice is restricted and the challenge is often, although not always, one of physical coordination and fast reaction. Essentially, although the child can sometimes win the game, the machine calls the shots.

- In ‘serious’ *PC use*, the user’s cognitive skills are generally involved and the computer is more tool than partner in the interaction. Different programmes make very different demands on users.
- In *word-processing*, programming or the use of databases, the user is involved in a process which is essentially creative rather than interactive.
- Searching for information on a *CD-ROM* or the *Internet* requires fewer user interventions than a computer game, and involvement is less physical and less intense. The user is in charge: the pace of decision making is slower (often too slow in the case of the Internet), but selection of what to look up requires thought and the choice options are many.
- In chat rooms on the *Internet* or through *Email*, interactivity is with other users, rather than with the technology alone.

‘ Virtual’ versus face-to-face communication

‘ Virtual’ interaction adds a valued dimension to young people’s social worlds, without necessarily challenging face-to-face relationships.

Rather email and the Internet add to the mix of communication modes available to young people, providing a unique opportunity to test out alternative identities or possible relationships.

- Email, like the telephone, for those whose friendship networks have access to it, is a valuable supplement to face-to-face conversation. It is particularly valued for facilitating the careful management of difficult or embarrassing topics.
- Games and chat rooms can invite the role-playing of characters quite unlike one’s everyday self to enjoy or test out new possibilities. Yet those who make on-line friendships seek to make face-to-face contact when they can.
- The attraction of the cybercafé lies not the technology alone but also in the social context. Young people like to share their experience of new technologies with others, and they regard the cybercafé primarily as an outdoors leisure activity which they share with friends.

PRINT MEDIA

Meanings and uses of print

A ‘print culture’ per se does not exist

- There is no significant association between times spent reading books (not for school), comics or newspapers. There is a tendency for reading books and magazines to go together, but the association between reading books and using the Internet is much stronger.

- In this respect, use of print media contrasts with that of screen entertainment media, whose use is generally positively correlated.
- Although it is commonly believed that children used to read more before the advent of television, there is little research to back this up.
- In the 1950s, American research showed that children read on average for some 15 minutes per day.
- In Britain, Himmelweit et al found in 1956 that children read for between 1-2 hours per week.
- In our survey we also find a figure of 15 minutes reading books per day. This represents an average across readers (57%) and non-readers (43%). The readers spend around half an hour per day reading books.
- On average, children spend five times as long each day watching television as they reading books. Parents we talked to were not always happy about this distribution of time and children were well aware of their feelings. Two thirds think their parents are keen for them to read books (but not watch more television).

The absence of a reading culture which integrates different forms of print media stands in contrast to the situation we find for both screen entertainment media and information technology.

Interestingly, increased *specialisation* in the print market as a result of television, with a transformation of the role of books in particular, was already evident forty years ago.² It seems likely that the introduction of the PC will encourage further specialisation of both books and television.

Our results show that each of the print media has a niche market amongst young readers, but none are a daily habit for the majority in any age group.

- *Comics* are most popular amongst 6-8 year-olds: 42% in this age group read them, on average for just over quarter of an hour on around 2 days a week.
- Between the ages of 12-17 seven in every ten read *magazines*, on average spending under three-quarters of an hour on a couple of days a week.
- Reading of *newspapers* almost doubles after the age of 14. 56% of 15-17 year-olds read one on average for just under half an hour on 4-5 days a week.

² Between 1946 and 1955, following the introduction of television in the United States, demand for non-fiction books increased while narrative fiction was more and more left to television. As a result the production of specialised magazines flourished, and magazine articles increasingly dealt with informational topics.

- Around two-thirds of primary school children read *books (not for school)*, on average for under three-quarters of an hour on 4 days a week, especially at bedtime.
- Thereafter the numbers reading books drop off, until at the age of 15-17 only 45% do so. On average these teenage readers read on 2 or 3 days a week only, but spend around an hour and a quarter when they do read.

Access, uses and meanings of books

Unlike television, having books at home is by no means universal

Ownership of books that are not school books (Table 5) varies by both the age of the child and the social grade of the household, though not by gender. Children from working-class homes, and older children, are significantly less likely to have books anywhere in the home.

Fewer homes have books than have television sets. Despite the discrepancy in cost, no more children own books (twothirds in all) than have their own television set.

The place of books in young people's lives is changing, threatened both by IT as a source of information and television as a source of narrative

- While books are mainly associated with school and information, not entertainment, their informational role is increasingly challenged even in schools by the drive to introduce Information Technology, particularly CD-ROMs and the Internet.
- In consequence, those who have access and use a PC are almost twice as likely to say they would choose to look up information on a PC rather than turn to a book.
- Moreover, those who use their PC other than for game playing spend at least as long on their machines as readers do with their books.
- The minority of children and young people who view books positively most often either talk about their informational value or are interested in a particular type of content, typically horror. But for a good story, most children - except possibly younger girls - are likely to turn to television or, even, adventure-based computer games.
- Overall the 'image' of books is poor. They are widely seen as boring, old-fashioned, frustrating and as requiring altogether too much effort. Books aren't trendy - they are ,what your parents approve of'.

TABLE 5

Percentage with books (not for school) in the home by gender, age and social grade

		Gender		Age			Social Grade		
	All	Boy	Girl	6-8	9-11	12-14	15-17	ABC1	C2DE
In home	87	86	89	92	88	87	83*	94	82*
In bedroom	64	62	66	69	66	64	59	73	58

Note: * = statistically significant difference

Who reads books nowadays?

Yet despite their poor image, many enjoy books. Overall, two-thirds of girls, middle-class and primary school children read compared with only around half of boys, working-class and secondary school children.

- 64% of girls read books in their leisure time compared with only 49% of boys. (Use does not follow access here, for girls and boys are equally likely to have books at home.)
- 67% of 6-11 year olds read books compared with only 53% of 12-17 year olds.
- 64% of middle-class children read books compared with 51% of working-class children.

Gender and class are important factors only at certain ages, however.

- Before the age of 15, those who spend more time reading books are more often girls, though they are equally likely to come from middle-class and working-class homes. They enjoy reading magazines as well as books.
- Between 15 and 17, however, those who read more than average amounts are as likely to be boys as girls but much more likely to be middle-class and to come from media-rich backgrounds where PCs are more commonly found. By this age, reading has become a specialist interest and readers read for longer and attach more value to their reading.
- At all ages those who read more have more positive attitudes to school and values more in tune with those of their parents.

Two styles of media user read more than average - ,traditionalists' and, especially, the ,book lovers'.

, Traditionalists'

Although they do not spend as much time with books as book lovers, traditionalists show more than average enthusiasm for books and magazines.

Otherwise they are a heterogeneous group with no specially strong affiliations to any particular medium. The majority of traditionalists are aged 12-14. We found none amongst the older children, who have usually developed more specialised media tastes.

Traditionalists are a little more likely to be girls, with no differentiation by social grade.

- They spend average amounts of time watching television and listening to music and, like screen entertainment fans, they spend little time with computers, though unlike them, they also spend little time with computer games.
- Like the book lovers, they are most likely to turn to a book if they want to learn about something, and as likely to name a book as to name television as something they concentrate on.
- Magazines, though not books, are a major topic of conversation with their friends, and they are the only group to buy more magazines than music tapes or CDs with their own money.
- They are relatively less likely to have a ,media-rich' bedroom and tend not to spend a lot of time in the bedroom. (see *Bedroom culture*). However, together with low users of media, they are most likely to say they often feel bored.

, **Book lovers'**

As we would expect from the greater availability of books in middle-class homes, book lovers (those whose ,media style' includes a considerable amount of time spent reading books) are more likely to come from middle-class families.

However, despite the finding that girls on average tend to read more than boys, book lovers are *not* more likely to be girls.

Their numbers decrease slightly until the age of 14, but thereafter there is a resurgence of interest in books, until by the age of 15-17, 1 in 5 is a book lover.

- Book lovers spend less time watching television than any other group apart from low media users, but spend more time with PCs than any other group bar PC fans.
- Their home environment tends to be ,media-rich', and they are relatively more likely to have their own PC as well as books, and less likely to have their own TV or TV-linked games machine.
- They are the most likely to buy books with their own money, to swap them with friends, to say they concentrate on reading books and talk to friends about them. Together with traditionalists, they are most likely to turn to a book if they want to learn about something.

- Together with low media users (who are mainly primary school children) they have the most positive attitudes to school and are least likely to say they get fed up with their parents telling them what to do, suggesting that there is less conflict in this group between their values and those of the adults around them.

MUSIC

Access is near-universal, but uses and meanings vary greatly

There is almost universal access to audio equipment of some kind in the home, the great majority who have such access make use of it, and listening to music takes up more time than any other medium except television (see *Summary Table 6*). However, *content* wholly transcends the mode of delivery. Radios, hi-fis, personal stereos, cassette players and television are all used to provide music, but young people make little distinction among these.

Music plays a uniquely flexible and pervasive part in children's and, especially, teenagers' lives.

- Hardware can be portable, making it adaptable for diverse situations.
- It is affordable (most can buy CDs and tapes with pocket money).
- Music can be enjoyed alone or in company, matching many different moods.
- It can be creative: a few make or mix their own music.

Music rivals television as one of the most popular media

In popularity, music comes second only to television. Like television but unlike all other media, music works well both in the foreground, as an intensely immersive experience, and in the background, as a pleasant backdrop for dull or routine tasks.

Like television, music is also a medium where content preferences are widely used to communicate identity, and it is as widely available in bedrooms/personal spaces as television.

For music, age is the key demographic variable

As children grow older and friends replace the family as the social pivot in their lives, the role of music grows in importance. Music is central to the social life of teenagers in particular.

- At 15-17, 65% talk about music to their friends, almost as many as talk about television (73%). Further, 75% swap music tapes, CDs or records, many more than exchange videos (48%), magazines (31%) or computer games (26%).
- At this age, taste in music is heavily used both to communicate belonging (common at all ages) and to mark one's individuality. Some resist being bracketed as a „fan“ of any one band or musician in particular, while others, somewhat tongue-in-cheek, present their musical allegiance as a matter of fashion, not to be taken too seriously.
- Establishing musical preferences is something of a rite of passage, marking off the young person's world from that of the parent. Yet although it is used to establish difference from the adult world, music also provides a way of entering that world. Lyrics explore and give expression to troubling adult emotions: the grand scale of pop stars' lives and lifestyles provides contemporary narratives of success and disaster, cautionary fables and fairytales which can, on occasion, even be aspirational.

, **Music lovers** '

Music fans as a special interest group only emerge in the age group 15-17. These young people are predominantly girls (74%) and are more likely to be working class (67% C2DE).

As well as spending nearly two and a half hours a day listening to music they watch a great deal of television, making them the heaviest media users of all.

Although not book readers, they are amongst the most avid readers of magazines, comics and newspapers.

They do not play computer games and are the least comfortable with computers - only 52% think they are exciting.

Although their bedrooms are not particularly well equipped with new media, three-quarters have their own television set (average for their age) and they are most likely to have a video recorder.

Young people in this group are rather dissatisfied with their lives:

- They are most likely to feel that there is not enough for them to do in the area where they live.
- They are the group with the least positive attitudes to school.
- They report spending most time in their bedrooms.
- They spend least time with their families and most with one best friend.

Music plays a significant role in their social interactions:

- They often swap and buy magazines, music tapes or CDs and videos.
- Music is the medium they especially concentrate on and discuss with friends.
- Music fans are significantly more likely to think that a happy family life will be important to them when they grow up and the least likely to think a good education will be important, although they do value an interesting job. They are very concerned with appearances, being significantly more likely to think wearing the right clothes and being good-looking makes you popular.

TELEPHONE

While not central to our study, the importance of the telephone for many children and young people as a means of keeping in touch with friends especially, as well as distant family members on occasion, make it essential to the media mix of young people's daily lives. We confine ourselves to brief comments here.

Use does not follow access

Although almost every home has a *telephone*, only 59% of children and young people say they ever use it and only a tiny minority (5%) have their own (see *Summary Table 6*). This is particularly true of younger children, boys and children in working-class families.

- 57% of children under the age of 12 with a telephone available in the house say they do not ever use it.
- 44% of boys and 44% of working-class children with one at home never use it.

The discrepancy between access and use would seem due to parents' reluctance to incur the open-ended costs of making the telephone more accessible to their children.

- Parents are almost as likely to make rules about use of the telephone (42% of children say they do) as they are about their child going outside the home (47%).
- According to their children, more parents make rules about using the phone than about watching television (35%) or using/playing on the computer (27%).

While not thought of as a leisure medium, the telephone is used recreationally by many

- Older children in particular value the telephone greatly.

– It is vital for keeping in touch with friends and in order ,not to feel left out’. After a multimedia computer, a mobile phone is the piece of media equipment most often chosen by children as something they would like to get on their next birthday.

SUMMARY OF ACCESS AND USE

We have discussed access and use of each medium by children and young people according to the main media categories.

We here summarise the findings for all media for ease of comparison (Table 6).

TABLE 6

Summary of access and use for all media

	Access		Use		Time spent
	% having at home	% having in own room	% using		Average minutes per day spent by users
Screen entertainment					
Television	100	63	99		147
Cable/satellite	42	5			
Video	96	21			
TV-linked Gamesmachine	67	34	Computer games	Computer games	Computer games
				64	45
Music			Listening to music		Listening to music
Radio	95	59	86		76
Hi-fi	96	61			
Personal stereo	83	68			
Communication					
Telephone	93	5	59		N/a
Mobile phone	30	1			
Print					
Books	87	64		56	28
Comics	N/a	N/a		28	8
			9+ only		9+ only
Magazines	N/a	N/a		66	13
Newspapers	N/a	N/a		35	13
IT			At home	At School	PC (not games) in leisure
PC	53	12	42	88	31
CD-Rom	31	4	21	49	
Internet	7	1	4	11	8

KEY IMPLICATIONS OF THE RESEARCH FINDINGS

In what follows, we draw out the implications of the findings in terms of five themes, showing how each may contribute to current academic, policy and public discussions.

MEDIA, FAMILY AND FRIENDS

While spending time alone is often valuable and, indeed, valued by children and young people, they remain strongly motivated to seek out others, preferably friends and preferably out of the home. But as young people encounter many restrictions on their freedom, they often stay at home and spend time with media instead.

Television is the medium most often shared with family

In the home, while most media are seen by family members as part of their individual 'media style', television - even in multiset homes - is most often the medium which brings family members together.

- As their children grow older, parents share fewer and fewer activities with them. But watching television together stays at the top of the list (followed by having a good talk and helping with homework).
- Two-thirds (68%) of children watch their favourite programme with someone else, nearly always family.
- Indeed, television is a way of life in many families: 1 in 5 children wake up to find it already on, 1 in 3 find it on when they come home from school, and 2 in 3 say it is still on when they go to bed.

Drawing the media into social life

While the proliferation of media goods within the home appears to be contributing to a more general tendency within the family to ever more individualised and often solitary use of media (see *Bedroom Culture*), we also see considerable efforts being made by children and young people to integrate their media use with their friends.

Thus within the peer group, young people frequently:

- talk about media - especially television, music and computer games
- swap media goods among themselves - especially new media goods (CD's, videos, computer games)
- visit the home of those with a new computer game or video or television channel
- use the telephone to chat with friends.

Thus even if media are not actually used together with friends, they still play a vital *social* role in peer culture.

- Television remains central to relations among friends. When asked what they talk about with friends, television was far and away the most popular topic of conversation. And although few manage to watch with their friends, many would very much like to.
- (They are more successful as far as computer games go: while playing alone is at least as common as playing with someone else, that someone else is usually a friend not a family member.)

In consequence, the perennial concern about whether children are *passive media users* poses an inappropriate opposition between mediated and face-to-face communication. For it is about soap opera that children gossip on the phone, they are most excited by the Internet as a way of meeting others in far off places, they visit each other to share a new computer game, they hire videos to watch in a group, etc.

Family types

We identified 6 *styles of family interaction*, based on how families divide their time between shared and individual activities. There is a clear link between belonging to one of these groupings and media use.

- In ‘*intimate*’ families talk often about things which matter and eat together. These children spend longer watching television, video and playing computer games.
- In ‘*distanced*’ families, children share few activities with parents. They also tend not to watch television with parents, and, if they play computer games, they do so more often with friends.
- In ‘*all-round*’ families, various kinds of interaction with parents are high. If these children play computer games, it is more likely to be with family members.
- ‘*Conventional*’ families generally eat and watch TV together, but are least likely to involve children in key decisions. If these children play computer games, they are more likely to do so alone.
- ‘*Outward looking*’ families are most likely to talk about things together - about the news, about what matters to the child - and so they also talk about the media.
- ‘*Democratic*’ families share big decisions, but there is little link to their media use.

In this typology of family interaction styles, the age of the child is crucial: ‘*all-round*’ families are more common for younger children, ‘*intimate*’ for those in their early teens, ‘*outward-looking*’ for older teenagers. Thus family interaction styles need not be fixed but alter and adapt as family members grow and change.

One key dimension which differentiates families is that between those families who 'live together separately', using media according to their divergent lifestyles, and those families who are committed to sharing a common timetable and leisure pursuits, who thus find a place for the media within these shared activities.

Although not a major element in our research, even this tentative typology shows how media use may be influenced by patterns of family interaction. More research is needed to explore the fit between media use and wider family dynamics.

How much is too much?

Parents tend to use domestic media - especially television - to structure the 'timetable' of family life. Within this, they try to ensure that their children 'spend their time well' on a diversity of activities, rather than spending 'excessive' time on any one medium. In this they are generally successful. As we have seen, most children and young people develop media styles based on combinations of several media.

Nonetheless, the 'leisure timetable' of a few may be dominated by a single medium.

Who, then, are the minority who spend relatively high amounts of time on just one medium? We identified 1 in 5 of our sample who fit this specification, though we caution that to call them 'addicts' goes significantly beyond the available data.

- Most of these young people spend their time with *television* (especially older and lower social grade children). On average they spend over three and a half-hours a day viewing.
- Unexpectedly, the medium next most often used in this way is *books* (where younger, middle-class girls are the biggest readers). These children on average spend just over an hour a day reading (only about quarter-of-an-hour less than they spend watching television).
- Rather fewer children spend a lot of time solely on *computer games*. (This is largely because such children often also watch more than average amounts of television.) They tend to be younger and working-class rather than middle-class. On average, they spend two hours a day playing. If they also watch more than average amounts of television they play even longer - for over two and a half-hours a day.
- Interestingly, both heavy book readers and computer games players report feeling positive about themselves, but the heavy TV viewers tend to have lower self esteem.

- We found no children who spent large amounts of time on the PCs or the Internet and only average or below average amounts of time with other media.
- While we found a modest number of children experienced with the Internet, including some who had found ‘adult’ sites, we did not encounter children upset by such materials.
- On the other hand, Internet users who spend most of their free time alone spend on average 5 times as long on line as those whose free time is spent with family or friends. These findings, however, should be interpreted with caution, as sample sizes are very small.

If we take those who fall into the top 20% for both time spent with television and computer games (those whom we might call the screen entertainment ‘addicts’), they represent only a tiny minority (1% of the sample). On the other hand, they do spend a worrying 7 hours a day in front of the screen.

In the main, however, children and young people are balancing diverse media activities rather than focussing on just one.

We pursue the question of media use within the family in two key respects: the shifting balance between media used in the privacy of the bedroom and in the shared living room (see ‘Bedroom Culture’); and the consequences for parents’ ability and concern to regulate their children’s media use at home (see ‘Parental Regulation’).

BEDROOM CULTURE

What is bedroom culture?

Traditional images of media use, especially television, centre on the family living room. But today’s media are more personalised, increasingly dispersed throughout the home. From around 9 years old, children’s bedrooms become important to them as a private space for socialising, identity display and just being alone. The media play an increasing role in this.

Overall, 72% have their own rooms and need not share with a sibling. Thus for many children and young people, the bedroom also provides a well-equipped opportunity for media use, away from intrusion or regulation by parents and siblings. Older children and teenagers especially are likely to view their bedroom as a social place where they can combine friends and media, establishing a lifestyle away from parental monitoring.

Equipping the bedroom represents an ideal compromise in which children are both entertained and kept safe. After all, parents are more fearful of their children's safety outside the home than of any media-related dangers. As many young people do not think there is enough for them to do in their neighbourhood, they are only too happy to receive either new or hand-me down televisions, VCRs, etc.

Children's bedrooms are well-equipped with media

Music media are most popular: 68% have a personal stereo, 61% have hi-fi and 59% a radio. Screen entertainment media follow close behind: 63% have their own television and 21% have a video recorder, while 34% have a TV-linked games machine and 27% have a Gameboy. Two-thirds (64%) have books (not for school) and as many as 12% have their own PC, though only 4% have a CD-ROM and 1% a modem (See *Summary Table 6*).

Inequalities. As we have seen (see Tables 1, 2 and 5) not all share equally in the well-equipped bedroom. Older children and teenagers possess more media, with the exception of books, and similarly more boys than girls own most media, with the exception of the personal stereo.

Working-class children (or children with less educated parents) are far more likely to have their own screen-entertainment media (television, video, games machine) but fewer books.

While income affects media in the home, parental education is what makes the difference in the bedroom.

- Income strongly influences the acquisition of media elsewhere in the house, but is rarely a predictor of children's personal ownership of media.
- More highly educated parents are less likely to put a television or video recorder in their children's bedrooms, but more likely to provide them with books.
- *What do parents think of TV in the bedroom?* While 2 in 3 children have a television in the bedroom, only 19% of parents think this is a good idea and 31% think it is a bad one.
- Middle-class parents, and parents of younger children, are less likely to approve of having a television in the child's bedroom.

- However, parental beliefs about the effects of television programmes have little to do with whether or not the child has their own set, and 2 in 3 parents are ‘quite satisfied’ with programmes available for their child.

Bedroom provision falls into four types

- The ‘*media-rich*’ bedroom contains a variety of media, including screen entertainment, music, books and, more than other types, the PC. This is more typical of boys, older and working-class children.
- These bedrooms are often located in media-rich homes. However, we encountered a proportion of relatively low income households (often single parent households) where the child’s bedroom was equipped apparently at the expense of the home.
- *Books and music* or, increasingly common among teenagers, bedrooms prioritising *books and the PC* are more typical in middle-class homes. A screen/print trade-off is clearly observable here, for these bedrooms are also distinguishably by being particularly low on screen media, especially television.
- The ‘*screen entertainment*’ bedroom - more common among working-class boys - tends to prioritise the television, TV-linked games machine, and for some, a VCR, over books and music equipment.
- Lastly, a fair proportion of bedrooms may be characterised as ‘*media-poor*’.
- Interestingly, these are not necessarily those of poorer or younger children, though these children do tend to be lower media users.

Media-poor bedrooms are associated with a variety of households. As pointed out earlier, there is no simple relation between household income and provisioning of the bedroom. Rather, two factors are relevant. First, this level of provision may represent a disinclination to prioritise screen media. Second, it may reflect a preference on the part of parents for shared rather than personalised media use within the family.

Implications for media use

Media in the bedroom are heavily used

Children’s and parents’ accounts often differ in relation to bedroom viewing, making it difficult to obtain a clear picture.

But there may be grounds for concern regarding viewing after 9 pm without parental mediation.

- 1 in 3 children with their own set say they watch television in their bedroom after the 9 pm 'watershed'. This includes as many as 28% of the 6-8 year olds. Gender and class make little difference here.
- Nearly 1 in 3 with their own TV say they usually watch in their bedroom after school and in the evening. Further, those with their own TV are twice as likely to watch their favourite programme alone.
- Other media in the bedroom are also heavily used. Those with particular media in their own room (e.g. television, music, computer) spend more time on those media compared with those who must share with others.

Interviews with children and young people showed over and over again how personally owned media are used as an audiovisual backdrop, as source of images for identity development, as sign of conspicuous consumption and as a focus for shared, social activity.

We pursue the implications of Bedroom Culture for domestic media regulation in the next section (*Parental Regulation*).

PARENTAL REGULATION

Parents' concerns about media

In broad terms, parents do not worry overmuch about their children's media use, though many express more general qualms regarding the quality of the childhood they are offering their children compared to that which they themselves experienced.

- Media use ranks low among parental concerns for their child: drugs are named by 51%, the child's job prospects by 47%, the child being a victim of crime by 39%. By comparison, 24% are concerned about sex, violence and bad language on television and only 6% about addictive computer games or violence, sex and bad language on videos.
- Media use causes arguments in only a minority of households: TV in 34%, the telephone in 30%, computer games in 15%, videos in 14% and music in 8%.
- As a cause of family arguments, the media thus rank behind helping in the house (59%), homework (49%) and going to bed (48%) (though in practice television viewing may be implicated in each of these).

Parents do have some concerns about media, though, more so for television than for computers

- Contrary to the moral panics about television, parents are more likely to think television affects their child's consumer desires and reading than they are to worry about televised violence.

- Those parents (equally working-class and middle-class) who are concerned about standards or negative effects of television appear to act in accordance with their beliefs, for they both watch less television themselves and have children who watch less.
- Most parents are positive about the role of computers in their children's lives. Nearly all (95%) think it is more important for children than parents to know about computers. Parents of boys are especially likely to think this, and 79% are therefore keen for their child to know more about computers.
- However, only 69% of parents say they themselves are very or fairly comfortable using a computer, compared with 92% of their children.
- Working-class parents feel less comfortable with computers than middle-class parents.

While generally positive, therefore, parents of girls appear a little less supportive, and working-class parents a little less confident, in encouraging their children's computer use.

Parental regulation of media use

Parents use various kinds of regulation of their children's media use, though none is as frequent as their regulation of the child going out of the house. Television and telephone are top of the list as the most restricted media, followed by computer games.

- Positive strategies include chatting to their children about a variety of media. Around three-quarters of parents say they discuss with their children what they see on television and over half sometimes watch with their child to aid their comprehension.
 - Restrictive strategies for limiting or controlling viewing are used by more than half of parents, especially those with young children or those with more concerns.
 - Children and parents do not necessarily agree on media regulation. Fathers and mothers both say they regulate their child's media use. But their children report considerably less regulation, especially from fathers.
 - Our pilot research suggested that while 3 in 4 parents think their child mostly follows their rules for viewing and only 12% say they have no rules, as many as 42% of children say their family has no rules for watching television.

Overall, British parents are generally satisfied with the media, especially the television programmes, available for their children.

They worry rather little about their child watching television or playing computer games unsupervised in their bedroom, and they consider their child (though often not other people's children) to be a sensible and discriminating media user.

Further, children and parents are often in tune with each others' media interests, to some extent obviating the apparent need for rules to regulate media use. We have noted this to be the case for screen entertainment fans and book lovers.

We can add that parents who watch a lot of television tend to have children who do the same.

This suggests that here, as in other situations, parental example may be more powerful than parental rules.

Confidence in the regulators

If nationally, the media environment is increasingly difficult to regulate, resulting in ever more expectations being placed on parents' shoulders, so too domestically it is less easy to supervise than before.

The argument that public regulation should not intrude into the privacy of the home found little support amongst parents.

- On the contrary, parents rely on the good judgement of broadcasters and media regulators and strongly express the wish to be able to continue to do so.
- Moreover, parents are generally of the view that once their children have reached their early teens, it is all but impractical for them to attempt restrictions on their media use at home.

Being able to rely on regulation is especially important to parents in relation to *television* because most children over eight years old prefer family/adult programmes to those specifically targeted at children.

Relying on regulation is also increasingly important to parents in relation to *computer-based media* because many have little understanding of the computer games or Internet sites popular with their children.

Implications of 'bedroom culture' for domestic media regulation

As television sets spread into the bedroom, liberal regulatory options such as parental mediation through conversation during co-viewing become less practicable.

- Bedtime might be better termed ‘bedroom time’, for it marks the end of the family day rather than the start of sleep. On a school-day, average bedtimes range from 8.20 pm for 6-8 year olds to 10.50 pm for 15-17s, and individual media use continues after this time for many.

We observed little enthusiasm among parents for taking on themselves a more restrictive approach to their children’s media use. However, the knowledge that children are watching television later into the evening, in a place relatively difficult to supervise, may lie behind parents’ endorsement of the broadcasting watershed.

- 82% of parents think the ‘watershed’ is ‘a very good idea’. One third agrees with the present time of 9 pm, while a quarter favour 10 pm.
- As a strategy, parents find trying to regulate children’s media use by the clock impractical for all but the youngest children. Deciding where to put media within the home offers a more manageable strategy, but depends on many factors other than that of controlling children’s media use.

SOCIAL INEQUALITIES

Throughout this report, as well as mapping social inequalities where we have found them, we have noted those occasions where inequalities might have been expected but do not in fact occur. We have also flagged up those factors which may act to perpetuate or even accentuate such inequalities as currently exist. Here we summarise these inequalities – or differences - in terms of gender, social grade and age.

Gender

Significant gender differences exist for almost all media activities

The link which unites media preferences is content. Boys’ fascination with sport and girls’ with the narratives of people’s lives shape their media use.

- Boys’ favoured media activities centre round *sport* and competition, clearly shown by their favourite television programmes and computer games.
- Girls are more interested in *narrative* content on television, in reading magazines and books and in listening to music.

This suggests that if we wish to encourage more girls to use PCs or boys to read, efforts should be directed at improving the relevance of the content to their main interests. More books about sport and competition? More adventure or other narrative-based computer games with female heroines?

Interest in different content leads to girls and boys preferring different media

- Girls' pleasure in using the telephone and (for those few with convenient access) in emailing friends, flags up the importance for them of direct *communication* with others.
- For example, the main use of the telephone for the majority of girls (59%) is to chat to friends (only 35% of boys use the phone to chat).

Clearly there is a common thread (interest in people and communication) which binds girls' interests in narrative and communication.

- Boys are more enthusiastic in general about *computers*. They are both interested in them as technologies and more likely to see them as fun, associating them more than do girls with game playing.

For example, boys' leisure use of PCs is dominated by games playing (69% of boys who use a PC at home say they spend half or more of their time on the PC playing games; 40% do so all or most of the time.)

Media access at home is different for boys and girls

Boys are more likely to have their own PCs and screen entertainment media (see Tables 1-4). Indeed, 22% of boys compared with only 9% of girls have the only PC in the family in their bedroom.

It appears that boys, more than girls, are pressing their parents for computers and games machines.

- 20% of boys (but only 4% of girls) who don't have a games machine would like one for their next birthday.
- 18% of boys (and only 11% of girls) who don't have their own PC would like one for their next birthday.

Girls have few advantages in access. Even though they are more likely than boys to read, use the phone or listen to music, they are not more likely than boys to have their own books or telephone or hi-fi.

Use of IT at school differs little by gender

Girls and boys receive broadly similar access to IT, but girls and their teachers often believe in gender differences, in terms of confidence if not competence.

- Beyond separating girls and boys into different groups, teachers seem at a loss in dealing with the tendency of girls to lose interest in computers as they grow older.
- The absence of girl-friendly software, the scorn of peers regarding computer ‘boffs’ and ‘geeks’, and their unfamiliarity with computers as fewer girls play games, do not help.

A caution. It is important to note that discussion of differences tends to mask the considerable overlap between the interests and activities of boys and girls. For example, although *overall* more girls read than boys, ‘book lovers’ (who spend much more time reading than the average for their age) are just as likely to be boys. The same caution applies to the discussion of social grade differences which follows.

Social grade

Social grade primarily makes a difference in terms of media access, not in terms of use or interests. In this it contrasts with gender (and age) as a source of inequalities.

Middle- and working-class children do not differ in content preferences

- We found no significant differences between middle-class and working-class children in their preferred types of television programme, their favourite kinds of computer game or their named interests.

There are, however, some differences in media use

- Working-class children spend longer with television and computer games.
- Middle-class children are more likely to be readers, but they do not spend longer reading than working-class readers.
- Interestingly, those working-class children with a PC at home use it just as much as do middle-class PC users.

Importantly, there are major discrepancies between the social classes in access to media in the home (see Tables 1-5)

Working-class families are significantly less likely to have most media (and inequalities are particularly marked in the case of the poorest - DEs).

- 82% of working-class (C2DE) families have a shelf of books, compared with 94% of middle-class families.
- 40% have a PC compared with 68% of middle-class families.
- 19% have a multimedia computer compared with 46% of middle-class families.
- 2% have an Internet link compared with 14% of middle-class families.
- However, 72% of working-class families have a TV-linked games machine compared with only 61% of middle-class families.
- There are no class differences in having a television, cable/satellite link or hi-fi.

Personal ownership of media by children also reflects the tendency for working-class families to prioritise screen entertainment media and middle-class families to prioritise books

- 71% of working-class children have their own television set, 26% their own VCR and 39% their own TV-linked games machine (the figures for middle-class children are 54%, 14% and 27% respectively).
- Only 58% of working-class children have their own books, compared with 73% of middle-class children.

Social grade affects parental support for the PC

Middle-class children are no more likely than working-class children to have their own PC because in a working-class family it is more often put in the child's bedroom.

- A quarter (23%) of working-class families with a PC in the home have placed the only machine in their child's bedroom, compared with only 11% of middle-class families.
- While it appears that working-class children are being privileged in this respect, part of the explanation may lie in their parents' relative inability to advise or share in the use of the PC.
- 35% of working-class children say they know most about computers in their family compared with only 17% of middle-class children.

Inequalities thus stem not only from provision but also support for the PC at home.

Reflecting these discrepancies in home access for media overall, middle-class and working-class children are adopting different media lifestyles

- Middle-class children are twice as likely to be book lovers or PC fans.
- Working-class children are more likely to be screen entertainment fans.

The role of the school is vital in redressing the inequalities of IT access at home

- We found no social-grade related differences in school access to PCs.
- Twice as many children have access to PCs in school as have access at home.
- For working-class children, school is far more likely to be the only place where they use the PC, CD-ROM and Internet, compared with middle-class children who are twice as likely to have access at home as well as in school.

Age trajectories

We have noted many age-related differences in both access and use. However (in contrast to the situation for gender or class) there is no general expectation that young people of different ages *should* be treated equivalently.

There are three main patterns in media use

- Use increases amongst older children (e.g. music, telephone).
- Use peaks in early teens (computer games).
- Use declines as they get older (books).
- Television viewing fits best into the first category. Although there is a slight falling-off amongst 15-17 year-olds, it is marginal compared with the steady increase up to that age.

‘ Serious’ (i.e. non games) uses of computers, as well as enthusiasm for computers, declines after 14. Without longitudinal data we cannot say whether this is an age or a cohort effect (i.e. does this particular cohort of 15-17 year-olds have less interest because they were older when the introduction of computers in home and school gathered pace?).

Styles of media use also depend on age

The youngest children are more likely to be low media users, while the oldest children have progressed towards more specialised media tastes.

- 42% of 6-8 year-olds are low media users and only 17% specialists of any kind.

- 20% of 15-17 year-olds are low media users and 60% specialists, including particularly large amounts of listening to music, reading books or using PCs.
- The middle years see the greatest proportion of screen entertainment fans.
- 39% of 12-14 year-olds are screen entertainment fans.

Whatever their age, most young people wish to be a few years older, in order to have access to the opportunities and facilities for which they are constantly being told they are too young

Media use and tastes are used as markers of maturity:

- owning more media goods
- watching late night programmes
- having access to older-rated videos
- preferring particular kinds of content (especially horror but also information).

Media contents targeted at their age can often seem patronising to children. Instead they generally prefer media intended for older people or content which blurs the boundaries between child and adult (such as the teen soaps where teenagers act like adults or comedy shows where adults act like kids).

COMPUTERS IN EDUCATION

As the above section on ‘social inequalities’ makes clear, availability and use of computer-based media at home is unequal, depending on the gender, age and, most especially, the social grade of the child or young person.

Consequently, the teaching of IT in schools is crucial.

IT is posing problems for teachers

In the 13 primary and secondary schools we visited, we found teachers attempting to cope with a variety of difficulties in introducing IT (here, as before, we refer to the PC, CD-ROM and the Internet).

Primary schools are overstretched

It is often classroom teachers who are taking on the role of 'IT specialists' and they tend to describe themselves as overstretched and ill-equipped for this additional new role. Limited time, money or motivation means that resources may not be used effectively.

Secondary schools also have difficulties

While secondary schools are more likely to have a dedicated IT specialist and technical support staff, the view remains that IT, in both human and technical terms, is insufficiently resourced.

Equipment compares favourably with that in primary schools, but it appears that this sometimes depends on considerable efforts to obtain commercial sponsorship, windfalls from local businesses and parental support.

Lack of technical support and guidance for software

At both primary and secondary levels, there is often a lack of technical back-up once the equipment is purchased. In addition software tends to be chosen through trial and error. Teachers describe it as hard to know which software will support the national curriculum. Primary teachers especially feel a lack of guidance here - more so than for purchasing hardware - in spending their scarce resources.

Teacher's views

Teachers are acutely aware of the difficulties of introducing IT into classrooms. Many are enthusiastic about the potential, if not always the reality as yet, of IT in schools. Around the country, a variety of experiments with IT in schools are ongoing, and examples of best practice will soon emerge to guide further developments. Beyond this, teacher's wish list stresses more and better teacher training, more technical back-up, and more money.

Does having a computer at home make a difference?

Commitment to the school as an 'equalising force' is generating problems for parental involvement in education

Our primary concern in including IT at school in the research was to investigate the relation between IT at home and school. As we have shown (see *Information Technology*), social inequalities in IT access and use are far less evident in school than in the home,

raising the opportunity for schools to act as an equalising force as regards IT. However, while IT policies for schools proceed apace, more and more parents are buying a PC for home, and it appears that this is creating further difficulties for teachers.

- Parents wish to support their children's education. They often explicitly buy a PC for 'educational reasons', and tend to believe that education occurs at home as well as at school. (In practice, they often find these computers are used for games.)
- Moreover, the quality of parental support is also socially stratified.
- While middle and working-class parents are equally concerned about their children's education, working-class parents report less confidence with computers, and their children less often think their parents can help them with the computer.
- In consequence, teachers are increasingly faced with children with different computer experience and expertise. This makes it difficult for them to take advantage of transferable skills learned at home within the classroom. Indeed, many think it would be socially divisive to draw on skills learned at home. Faced with this situation, teachers tend to claim that home experience of computers makes little difference in the classroom.
- It is also the case that if pupils have up-to-date IT facilities at home, they tend to be critical of school equipment. Over and over again we heard how the school computers were out of date, boring, poorly taught, or hardly used.
- On the other hand, those who lacked home facilities were more likely to be enthusiastic about school facilities. And some schools, of course, had particularly impressive computing resources, which pupils appreciated.
- Importantly, however, those children who use a PC only at school report themselves as being no less excited by or confident with computers than those who also use one at home.

Not everything rests on the school, of course. Social inequalities in home access might be redressed by increased *public access to IT* (e.g. *libraries, cybercafés*). We found that those without home access to IT do indeed seek it out elsewhere:

however, at present public access is sparse and, for some, costly. Use of IT at friends' or relatives' houses furthers rather than compensates for inequalities, for again it is those who are older, boys and/or middle-class who do this.

Towards a National Grid for Learning

Inequalities by social class and gender - as discussed above - represent some of the most difficult problems for policy makers, given the aim of providing widespread access to computers and the Internet in schools (and libraries) by 2002.

We end with some suggestions.

- *Integrate IT into the curriculum.* Pupils tend to see IT lessons as occasional events, separate from their other subjects, while IT teachers report difficulties in enthusing the subject specialists and in integrating IT into the rest of the curriculum.
- *Address inequalities earlier.* Much IT teaching begins in secondary school, by which age girls are already turning away from ‘technology’ and middle-class children may have already gained several years experience with computers at home.
- *Learn from computer games?* If free play on computers develops confidence and skills in using computers for more ‘serious’ purposes, policies which restrict game playing even outside class may be counter-effective.
- *Clarify the educational benefits of IT.* We note that teachers and parents are often not clear about the educational benefits (work-related skills, individually-paced work, special needs teaching?). Without a clear justification, teachers may remain sceptical. For example, getting the Internet is widely expected to be ‘the next thing’ but accounts of the potential gain remain unconvincing.
- *Build on parental involvement.* As PCs at home become more commonplace, how can teachers respond positively to experiences gained at home and parental support?
- *Welcome libraries.* Creating a culture of IT provision in libraries which appeals to young people across divides of age, gender and social class is a challenging task.

CONCLUSIONS

Finding a place for new media

As the media climate shifts around them, children and young people are combining a range of media in their everyday lives according to a *variety of lifestyle factors* which frame media meanings, access and use. Within this broad and diversified picture of the contemporary media environment, *newer media* - from multiple television channels to the personal computer and the Internet - are finding their place. While the very diversity of media provision and use makes generalisations about ‘children’ or ‘the media’ hazardous, certain issues stand out.

Our research shows that young people are assimilating new media into the structure of their everyday lives but rarely radically altering their ways of living

The expanding media mix. The present findings are in tune with the lessons from the history of previously 'new' media which emphasise that new media rarely replace or even, *displace*, older media.

- Rather, new media add to the available options, to some extent prompting new, more *specialised*, uses for books, television, radio, etc.
- How this occurs depends on how readily new media may be incorporated into young people's pre-existing practices *and priorities*, namely those of social interaction, communication, narrative and play.
- At present the new media occupy only a rather small proportion of children's time and attention. We suggest, therefore, that contextualising new media use in relation to other media and leisure activities serves to *diffuse public anxieties* about addicted or isolated children.
- Only a tiny minority of children (1%) is spending a worrying proportion of their leisure time with television and computer games.
- However, the future of books and the dissatisfaction of older children with the non-media-related leisure options available to them, will also be of concern to many.

Social changes occur only slowly but may be profound

Social and cultural change occurs gradually, making it difficult to pinpoint in a cross-sectional study. When we compare our findings with those from the early days of television, there are many parallels forty years on. Then as now:

children watched a diversity of television programmes but generally preferred those made for a general or adult audience;

their viewing habits - especially their amount of viewing - matched that of their parents;

parents used television to gain some respite and privacy for themselves;

children spent relatively little time reading books; they were hardly 'glued' to the set but rather were out with their friends whenever possible.

Yet as we proposed at the outset, the changing media environment can be viewed with a larger lens, as part of - and as *contributing to* - *wider social and cultural changes*.

New media can be linked to the changing social environment in the following ways

- The multiplication of *personally owned* media may be contributing to the shifting boundary between public and private spaces.
- *Diversification* in media forms/contents may be contributing to the growing importance of individualised lifestyles.
- *Converging* screen technologies may be contributing to the blurring of boundaries between information, education, work and entertainment.
- New ways of engaging with media, particularly the growth of *interactive* media, may have consequences for communication and social relations.

Public and private spaces for leisure

The changing boundary between *public and private spaces or spheres* is closely connected with media use in two ways

- The boundary of , *the front door*' . For rather different reasons, parents and children are dissatisfied with young people's access to public spaces and facilities. (This of course may or may not represent an actual decline in provision or in safety.) This can be linked to levels of provision and use of media within the home.
- The boundary of , *the bedroom door*' . As has been discussed in the sections on , *Media Family and Friends*' and , *Bedroom Culture*' , this division of communal and individual or private space *within* the home also has implications for media use (and family life), made possible in part by the multiplication of relatively affordable media goods.

Individualised lifestyles

Demographics do not tell the whole story

Our research demonstrated that socio-demographic factors (age, gender and social class) do not tell the whole story.

Leisure choices and media use are incorporated into *individualised lifestyles* which cut across these traditional categories.

There are many ways of mapping lifestyles, some more productive than others, and so we have experimented with several of these.

- The typology we offer of *media styles* has proved the most useful - integrating particular patterns of media provision in the home with particular choices, interests or preferences on the part of children and young people.
- Dividing young people into traditionalists, screen-entertainment fans, specialist media users (for books, music or the PC) and low media users has provided a

means of teasing out the complex relations between demographic factors and access to, and the meanings and use of, different media (see below, '*New media, new inequalities*').

- *Isolated children?* There are fears that individualised lifestyles and bedroom culture may mean more lonely children. Indeed, when we asked children and young people how they prefer to watch television or play computer games, the most common answer was 'alone'.
- However, the fact that the second most common answer was watching/playing with a friend suggests that the overall trend is unlikely to be towards isolation. (Indeed, it is the oldest medium of all - print - which arguably fosters solitary use most).

Media become less central to the family but more important among friends

Research has always shown a progression from family- to peer-orientation as children grow older.

- However children of all ages are increasingly able to choose in how far they wish to share their media interests with the family.
- At the same time, children and young people are seeking out new ways of sharing their media interests with friends, possibly being drawn ever earlier into a media culture focussed on identity and consumption.

It appears that, following in the path of radio and music media, the social uses of television have shifted in recent decades from foreground to background, from the centre of family life to a balance (struck differently in different families) between communal and individualised uses, and from the mainstay of the family evening to a casual, round-the-clock experience.

Possibly today's new screen media (the PC, multichannel television and the Internet) will follow. There are early indications of simultaneous use of the PC and other media, and households may come to own multiple PCs according to a pattern of 'living together separately'.

Converging activities: work/leisure/education/entertainment

Traditional oppositions between work/ leisure, entertainment/ education and home/ school are being transformed by screen-based domestic media.

Traditionally distinct activities and spaces are converging, as both work and education are increasingly brought into the home, facilitated in particular by the introduction of the PC.

This cultural (as opposed to technological) convergence throws up some new areas of possible contention.

The role and image of the domestic PC is under negotiation and is often seen differently by parents and children.

- Parents in general buy a PC to benefit their children educationally.
- On the other hand, both middle-class and working-class children mostly use the PC at home for games.

The meanings and practices surrounding the terms ‘work’, ‘leisure’, ‘education’, etc. also differ according to the social background of the home. As a result, the meaning of the PC, its location in the home, its users and uses all vary accordingly.

- In middle-class homes the PC has often been acquired by parents for themselves as much as for their children, as part of a culture which prioritises books and learning over screen entertainment. Computer ‘games’, unless they have educational content, are seen as less acceptable.
- Although working-class parents also have hopes for the PC’s educational potential, they are less likely to know how to use it and less likely to be able to help their child with problems. Working-class families are also more likely to value screen entertainment and less likely to be opposed to computer games (as exemplified in the numbers with Tvlinked games machines).
- On the other hand, working-class children are more likely to be the family computer expert, (with all that implies for self-esteem) and parents are more likely to place the only PC in their child’s room (giving them greater freedom to explore the technology).
- The relation between computers at home and at school complicates matters further, as the fit between computers at home and at school is an uneasy one.
- If the PC at home is linked to both entertainment and work, teachers in most schools, particularly secondary schools, are opposed to computer games.
- Fearful of compounding class inequalities, many teachers are reluctant to draw on PCs at home as an educational resource.
- Many teachers feel ill-equipped to integrate PCs into classroom teaching.

New ways of engaging with media

The ‘interactivity’ of new media is sometimes contrasted favourably with the ‘passivity’ of mass media

New modes of engagement with media? Despite the much-hyped potential of new forms of interactive media, these are either barely available as yet or the interactivity offered is very limited.

- Television viewing or book reading invites the viewer to be a *spectator*, and enjoyment comes through vicarious identification.
- By contrast, interactive computer games invite the user to become a *performer* and experience his or her own satisfactions directly.
- Yet the mental activity required of the reader of books or the viewer of a television programme can be considerable, while many so-called ‘interactive’ media offer limited response opportunities to the user.

The importance of media literacy and, increasingly, ‘net-literacy’

To take their place in the twenty-first century, children must be screen-wise as well as book-wise. The screen is becoming ever more central to education, work and leisure and new kinds of interaction or engagement with screen media are becoming available. Both trends make a wide-reaching programme of media and computer education essential for the acquisition of the necessary skills.

The majority of children, particularly working-class children, are likely for some time to gain their only access to IT through the schools. They need to be taught how to:

- operate the technology so as to integrate the computer into their working and leisure lives
- handle processes of information search and information management, including the potential information overload
- critically appraise and assess the relative value of information from different sources
- gain competencies in understanding the construction, forms, strengths and limitations of screen-based contents, including the development of their own screen-related creative skills.

European comparisons suggest that the UK ‘leads’ for screen-entertainment culture but lags behind for IT

By comparison with key European countries, children and young people in the UK have more access to, and make more use of television and computer games, but they have less access to the PC, multimedia computers and the Internet.

All of these gradual social changes - which both shape and are shaped by the changing media environment - occur in different ways for different groups within society. The question of new social inequalities, - new social divisions between the 'info-rich' and 'info-poor' - is of widespread concern.

New media, new inequalities?

For young people and their families, this is a moment in which definitions of new technologies are fluid. It is therefore a key moment for addressing social inequalities.

At present, the *cultural meanings* of the PC, CD-ROM and Internet are not fixed: young people are uncertain whether to associate the PC with print or with screen entertainment, or whether to associate the Internet with an encyclopaedia or with communication and fun.

Whatever adults think, it seems likely to be the latter rather than the former associations which most young people will find encouraging. After all, those who have found the communicative possibilities of the Internet, or the games potential of multimedia, are the most enthusiastic.

However, the experiences which young people already have had with new media, and the meanings they associate with them, are socially stratified.

Across the range of media, it would be a fair generalisation from our research that inequalities in *gender* predominantly arise from differences in content and content preferences, while inequalities in *social class* predominantly arise from differences in media access at home. Our qualitative work especially suggests that both these inequalities, neither of which is itself new, are now shaping young people's understanding and use of computers.

Gender

To the extent that *gender* shapes the use of new media through content preferences, then the relative lack of girl-friendly, communication-oriented or narrative-based software is cause for concern.

- If we look at girls' overwhelming preference for television drama and adventure-based computer games, their appetite (and that of boys) for narrative is obvious.

- Further diversity in computer games especially would be valuable, for it is noteworthy that boys talk about computer games in terms of challenge, mastery and control, precisely the pleasures which more girls might be encouraged to find in computers.
- There are some media - significantly not screen media - which girls do use systematically more than boys. Instead of a stress on the technological features of computers, the analogy between computers (especially the Internet) and the telephone, letter writing or magazines might prove more encouraging for teenage girls.

Social class

- To the extent that *social class* shapes the use of new media through differences in access, then the relative privileging of middle-class children at home in terms of both computers and books is cause for concern.
- The relative lack of IT at home is an obvious inequality, but the widespread association of multimedia and the Internet with books (reference books, encyclopaedias, libraries etc) may also prove disadvantageous for working-class children.
- It may also be problematic for this group, especially the working-class boys, that computer games are often held in low regard, yet these boys and their parents tend to view these as their ,way in' to computers.

Children and young people are distinctive media users

The temptation for those trying to anticipate changes in domestic media is to focus on the level of the household -charting household possessions, parents' views, etc. - without recognising that this picture will miss significant aspects of the meanings, access, use or expectations of new media for children and young people.

Complicating matters further, we have stressed that not only are children and young people in many ways distinct from adults, they are also a diverse population - varying according to gender, age, social class, lifestyle, etc., and so are not readily reduced to simple categories of ,the child' or ,youth'.

It does seem, however, that children and young people are particularly confident and enthusiastic adopters of new forms of media, generally sharing a forward-looking perspective which is not just desirous of, but also interested in, ,what's new, what's cool'.

On the other hand, it may be for rather more pragmatic reasons that households with children tend to lead in the adoption of new media. Given the complex dynamics of everyday family life, acquiring new media goods often appears to offer solutions to the many competing claims on domestic time and space which characterise everyday life at the end of the century.

RESEARCH METHODOLOGY

To achieve its research aims, the project was designed in accordance with three guiding principles.

The importance of context: access, use and meanings of new media were analysed in relation to older domestic media, to other leisure activities, to family life and peer culture, and to IT at school.

The importance of children's experiences: we have consistently tried to listen to the voices of children and young people as well as to their parents and teachers.

Multiple methods: the design combined qualitative interviews with over 200 children and young people from all over the UK with a detailed national survey of 1303 6-17 year olds across the United Kingdom.

Methods were as follows

- 27 *focus groups* (each group homogenous by age and gender) with 6-17 year olds in 13 schools around the UK.
- Individual *depth interviews* with children and, separately, their parents in 32 homes.
- *Survey questionnaire* administered in a face-to-face, in-home, computer-assisted interview with a random location quota sample of 1303 young people aged 6 - 17 (April-May 1997).
- Self-completion questionnaire to the *parents* of those surveyed (achieved sample = 978).
- Time budget *diary* of weekly media use, from 334 young people who took part in the survey (9-10, 12-13, 15-16).
- Interviews with *teachers* who are the heads of IT in 13 schools (primary and secondary).
- Interviews with 21 *Internet users* in cybercafés and 15 users in 'wired' schools.

- Supplementary surveys using the Broadcasters' Television Opinion Panel.
- Parallel projects by research teams in 11 European countries (Denmark, Germany, Finland, Flanders, France, Israel, Italy, Netherlands, Spain, Sweden, and Switzerland) have been coordinated by the British team.

This comparative research is still in progress and will be reported in 2000.

Further information. These summary findings are detailed in the full report, as part of a broad-ranging account of the changing media environment for children and young people. For a copy of the full report, *Young People, New Media*, contact Ms Carol Whitwill, S465, LSE, Houghton Street, London WC2A 2AE. Tel 0171 955 6490.

A book on the project, entitled *Young People and New Media*, by Sonia Livingstone and Moira Bovill, will be published by Sage (London) during 2000.

Further information on the European comparative research can be found in Livingstone, S., et al. (1999). Children's Changing Media Environment: Overview of a European comparative study. In Carlsson, U., and von Feilitzen, C. (Eds.), *Children and Media: Participation and Education - Yearbook from the UNESCO International Clearinghouse on Children and Violence on the Screen*. Göteborg, Sweden: Nordicom/Unesco.

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