

**Contribution to debate on
Do new technologies undermine or underpin the family?**

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When I was a child we had one telephone in the house. Calls were made mainly by the adults and were kept as brief as possible as they were expensive. We didn't get a television until I was 12 and my viewing was rationed with a weekly allowance. Not long after it was introduced in 1967, my parents offered to buy my grandparents a colour television but it was declined on the basis that it 'wasn't natural'.

We had one radio in the main family room, on a shelf next to the only books we had. This many [indicate] – comprising a gardening encyclopaedia and some cookery books. My father was an engineer and liked gadgets. We had a radiogram in the front room which extended most of the length of one wall and included a turntable, a radio, a reel-to-reel tape recorder and storage space for records.

I cannot think of any examples of technology upstairs in the house.

Fast forward to the lives of the 3- and 4-year-old children in our research project 'Entering e-Society'. This project has been funded by the Economic and Social Research Council and over the last year or so we have been visiting children in their family homes to find out what role technology plays in their lives. The research is a continuation of our work looking at how children use ICT in nurseries and pre-school settings.

What do we mean by 'new technology'? Parents and nursery staff usually think of computers but we use a much broader definition, as the following examples show.

Elizabeth is a 3½-year-old girl who lives in a rural setting with her parents, Mrs MacGregor, a home-maker, and Mr MacGregor, a van driver. Their earnings place them in the 'disadvantaged' bracket.

Mrs MacGregor didn't have up-to-date technology at home when she was growing up. Since then she's done Office Skills and Technology at college but says the computer skills she learned then are obsolete, and she feels unskilled now.

Mr MacGregor had five siblings and his family did not have much in the way of technology. As a taxi driver, the mobile phone is very important for his work but, generally, new technology doesn't play a big role in the life of this family. Although they think that Elizabeth will need to become familiar with technology in the future, there's no hurry. For now, she likes playing outdoors or playing mother and baby with her friend.

The family has three TVs with DVD players – one in the parent's bedroom, one in Elizabeth's bedroom, and one with a Sky box in the living room. They have one computer with a DVD drive and a combined scanner, printer and photocopier, but they do not have internet access. They have one stereo and an electronic keyboard with a microphone. Each parent has a mobile phone with a camera. Mrs MacGregor uses the internet connection on her phone to download ring tones, while Mr MacGregor uses his to download games. Elizabeth has a toy laptop – a VTech My Personal Computer - battery operated games, and toy mobile phones. The family also has a digital camera.

Elizabeth can turn the TV on and off but is not allowed to change the channels. She can switch on the DVD player and open it, but the remote control is too complicated to use. If she sits with her Mum she can use the arrows for the interactive TV and press the colour buttons to play games. She sometimes uses the camera on the mobile, but she is not encouraged to use it. Elizabeth taught herself how to use her electronic keyboard and toy laptop. She doesn't use the computer - her mother thinks it's too complicated and too much temptation. It was expensive, so therefore not to be used by children.

Another one of the children we have been visiting every two or three months is **Alison**. She is a 3½-year-old girl who lives with her parents - Mrs Yates, who works in HR and Mr Yates, who is a manager in the NHS – in a house on a new estate. Their earnings place them in the 'more advantaged' income bracket.

They have four TVs – one downstairs with video, DVD and Skyplus and three upstairs, including one with a Freeview box. They have broadband, a new computer, a laptop with DVD writer for Mr Yates' work, a new webcam, a printer and an Mp3 player.

Each parent has two mobile phones (one for work, one for personal use), all with cameras and internet connections. Mrs Yates uses the internet connection and often texts; Mr Yates mainly uses his phone for work.

The family has traditional, digital and video cameras. Alison has a walkman, a new portable DVD player, a karaoke machine, and a dance mat. She also has a toy cash register, a VTech My First Computer, Speak and Spell reading books, and a LeapPad. Mr Yates has a remote-controlled car.

Alison can use the portable DVD player with ease. She can use the TV remote control to switch the TV off and change channels. She can also turn on the TV in her room and insert a video. She can switch on the computer and is able to use a mouse, but cannot load any programmes. She knows how to answer the phone, is able to use the cameras under supervision, and can use all of her electronic toys independently.

Mrs Yates remembers when email was just coming into the workplace – she thought that it would never catch on, but now she is completely reliant on it and writes up to 200 emails per day.

She believes new technologies will be important in Alison's future life. Her husband shares this view but reluctantly - he wishes it were otherwise. She thinks that her husband is "frightened" by Alison's use of technology but recognises that it is important for her when she goes to school. Mrs Yates expresses concern that she

could be missing out on interacting with other children and on using their imaginations if they are playing with new technologies. She is also concerned about unsavoury content on the Internet.

These mini case studies show us **some of the complexities in families' attitudes to, and uses of, technology**. About half the families allow children to watch TV on their own in their bedrooms but some are only comfortable with viewing as a shared activity in a family room. **None of the children had a computer in their bedroom.**

Out of our 24 case study families, all but four report going to the park as one of their favourite activities, all but a different four play outside in the street or garden and more than half like to go swimming. For some children, technology doesn't feature in their favourite activities at all.

Households with internet access were evenly distributed across the income range. Some families (across income levels) are enthusiastic users of technology and parents in these homes encourage their children's engagement with computer games, webcams or internet sites such as Nick Jr or CBeebies. In these families, children's developing competences with technology are noted with pride and seen as necessary for a successful future.

In some homes, more traditional activities are highly valued and parents encourage imaginative games with dolls and outdoor play. Some of these parents say that they are not against new technologies but rather that they will wait until their child is ready or interested. **Across these case study families, there is no clear-cut divide in attitudes between those who are economically advantaged or disadvantaged or even, in many cases, between those families who have many forms of technology and those who do not.**

We have found a **stronger link between parents' own experiences of ICT and how this influences the opportunities they offer their children**. However, many parents are uncertain about the role of technology in their children's lives. Some will even claim that their children know more than they do.

Whether high tech or low tech, advantaged or disadvantaged, our families have well-developed parenting skills but they may lack confidence to decide which technologies are most appropriate, where they should be located and how often they should be used. Parents rarely ration the amount of television children are allowed to watch, as my parents did, but they often feel that they should ration the amount of time children spend at the computer. Like my parents, they feel that children should be in the fresh air.

They want to prepare their children for the world of work and school but they don't know if they should be buying expensive electronic toys that are marketed both as toys for play and as technologies that support learning.

Like me, even though they are much younger, these parents do not have their experiences as children to draw on when it comes to managing the use of computers, mobile phones or GameBoys in their households - whereas they *can* draw upon both their experiences and their parent's experiences for many other aspects of the parenting role.

But it would be naive to suggest that my low tech, low book childhood was culturally richer or a better preparation for school. Our research suggests that **it is not the technologies themselves that determine whether a family communicates, plays together, or supports their child's learning but the cultural practices of the family and the values that it holds. Families use technology: technology does not use them.**

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The mini case studies I presented earlier were snapshots of a specific time just over a year ago. Since then most of our children have started school, some have a new baby in the household, some are learning to read and write and some have acquired internet access, computers, new mobile phones and other forms of technology.

But the **increase in the number of technological devices has not necessarily led to increased use by the children.** For those at school there is less time available for play at home. And as they become more adept at independent play and as their skills at reading, writing and drawing emerge, they have other ways of spending their time.

As educational researchers, our interest in this study is partly in the role of technology in play and learning. We have identified **three main areas of learning: acquiring operational skills – the area that most people think of in this context; extending knowledge and understanding of the world; and developing dispositions to learn.**

The extent to which children are explicitly supported in their learning with and through technology varies across families and depends on many factors.

In many of the families who use mobile phones or digital cameras to take pictures, often sending them to friends and relatives, children are learning how to foster family memories and construct an identity for themselves within the family whether they actually operate the phone or camera or not. Where technology is used for work purposes at home, children learn about the role of technology in the world of work, although parents may not explicitly teach children. Some families use technology primarily for leisure activities and children will learn differently about its social value in those cases.

The home is an important site of learning and, even in low tech households, provides a much richer mix of technologies than many pre-school settings. **It provides opportunities for children to both observe and participate in authentic activities and to develop a sense of the cultural value and role of technologies. Children develop diverse technical, cultural and learning competences at home.** The question is not one of whether technologies undermine or underpin family life but how families use technologies and the range of cultural practices associated with them.

Entering e-Society is funded until spring 2007. This paper reports emergent findings but we are still collecting data and analysis will continue. The website for the Entering e-Society project is at www.ioe.stir.ac.uk/Research/e-Society/

An associated project looking at technology in pre-school settings (*Interplay: Play, Learning and ICT in pre-school settings*) was completed early 2006. The website is at [/www.ioe.stir.ac.uk/Interplay/](http://www.ioe.stir.ac.uk/Interplay/)

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