

THE FUTURE OF PRESTEL/VIDEOTEK

TELESHOPPING/BANKING IN THE 1990s

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Many people have argued that television rivals only printing as a communication method. If that is true, television is of fundamental importance to our way of life, and it might be useful to draw some other parallels between printing and television.

Printing began through a technological development - the invention of the printing press. The new printing press was perceived by Government to be a threat to its powers because the presses could produce large quantities of information and opinion which, in turn, could persuade the populace towards views that were not in accord with those of the Government. The Government therefore controlled the Press by licensing, taxation and other more subtle methods for nearly 200 years. With growing adult literacy, universal suffrage, free education and the commercial pressure from newspapers to exploit mass markets, the last vestiges of control disappeared. It is easy to forget the struggles of two centuries for the democratic rights of a free press.

There are many parallels with the growth of broadcasting and particularly the development of television. The pace of change however is much more rapid in the twentieth century. Two centuries of change translate into two decades in modern times. Television was rigorously controlled or more politely 'regulated' because it was such a powerful means of communication. That the broadcasters exercised the power bestowed by Government in a generally benign and even-handed way and at the same time managed to produce reasonable quality material goes far to explain why public service broadcasting both enjoys such a high public regard in Britain and is likely to be always with us.

At the same time one cannot look back on the era of single and later two channel television and wonder that a large proportion of the population actually organised their daily lives around the scheduling of favoured programmes. Peak electricity, gas, water and sewerage loads were recorded at the beginning and end of such programmes. The evening lives of the populace were in the hands of the broadcasters. The nation was geared to the imperatives of real-time broadcasting. And it is

probably true to say that the nation very much enjoyed it.

But it couldn't last. Once the novelty of the technology wore off, there were growing pressures to extend its scope, culminating in the extension to four channels. The slow and careful changes that were made to public service broadcasting were fine while the pace of technological change was slow but the transistor and micro-chip revolutions injected new imperatives for change, and the broadcasters saw their baby find new parents.

Television technology was just too important to be left to the broadcasters. The 1970s saw the development of the extended television and with it the decline in power of the broadcasters.

At first it was TV games - simple tennis then complex space invaders and then ultra-sophisticated multi-dimensional colour graphics games. The games came in electronic boxes and were plugged into the television through the antenna socket. And the television was no longer a television. It was a free-standing entertainment system which could be used at the consumer's whim. Then came the videocassette which could not only "time-shift" the broadcast material at the convenience of the consumer but could also use pre-recorded material such as films not produced by broadcasters. From the 1950s when real-time broadcasters communicated to real-time audience to the 1980s when broadcasters' tape machines communicate to consumers' tape machines was a leap from the real to the surreal.

Worse was to come. The addition of a handful of micro-chips to the television enabled it to display text and to input text. Teletex and viewdata (later internationalised as 'videotex') were born. Teletex and videotex were rival techniques aimed at delivering text-based services into the home. Teletex was on one-way system, broadcast like a television signal enabling information pages to be quickly accessed. The BBC introduced CEEFAX on their channels and the Independent Broadcasting Authority released ORACLE on their channels. Both services are excellent. By the middle of 1983 over 1,000,000 homes in the UK used those services. The services are cheap, costing the consumer nothing to run. Teletext has become a standard.

Videotex has not fared so well. It was originally conceived by the British Post Office in the early 1970s as a method of delivering interactive home information services via a telephone line to the home television. Some 70% of British households currently have a telephone and by the 1990s over 90% are expected to have one. The intention of the Post Office was to create more telephone traffic particularly in the evenings and at week-ends. The problems were that videotex is an "active" medium whereas the more usual mode of television usage is "passive" and that because videotex uses a telephone line it is expensive to use.

The Post Office (and later British Telecom) envisaged the use of videotex through a public service called Prestel. Prestel is a computer database that any videotex user can access and pay for on an "as used" basis. It was a pioneering service and unprofitable to British Telecom but by mid '83 it had 25,000 users and offered some 300,000 pages of information and services of different kinds.

It is difficult to fault the thinking behind Prestel. Since the Second World War the British have become more home-centred. Television, central heating, a housing boom, new household appliances, fitted carpets, furnishings, fittings, expanding home ownership, do-it-yourself mania and takeaway foods all pointed to consumers whose homes were becoming their castles. The British had never used the telephone at home to the same degree as Americans. Improved yellow pages services and new attitudes among young people are changing the picture but slowly.

The main method for buying goods and services in the home has always been mail-order whether through the established mail-order houses or through newspaper and magazine offers and advertisements. Videotex has not displaced this trade in any way. One wonders, is videotex not suitable for ordering goods? Or are there other considerations?

A technologist might argue that Prestel is not a vehicle for transaction processing (a pre-requisite for ordering goods from home), that the graphics on Prestel are crude and inadequate for representing products

and anyway it is too expensive to acquire and run the videotex television. There is a Gateway facility on Prestel that enables the consumer to connect through to a computer operated by a retailer or manufacturer but it is rather slow and still expensive.

A retailer in the mail-order business might take a somewhat different approach. Mail-order has always been a certain kind of retailing. It has its own rules and practices; it has proved quite resilient in recession; it has deep cultural roots but it also has to compete with other forms of retailing - and that is not easy. British retail and distributive trades are well organised, efficient, intensely competitive and among the best in the world. The British High Street is evidence of the strength of the industry. Stores, merchandise and methods are constantly being up-graded to give the consumer more choice and better value for money. Siting of stores is almost a science. Layout, decor, car parking, in-store traffic and even rest-rooms are subject to continuous study using the most advanced techniques available anywhere.

Mail-order has to be different and better if it is to hold its market. In-store retailing is not without disadvantages. Towns are often noisy and crowded. Parking is usually difficult. Travel is costly and time-consuming. There is often limited choice unless one shops around. Shopping around is tiring. There is seldom time for adequate thought about the purchase. On the other hand, once decided the consumer completes the transaction and carries the goods home immediately.

The mail-order catalogue provides a browsing facility that people enjoy. One might call it home window-shopping. The catalogue uses multi-colour display advertising with high quality photography to sell its wares. Most of the population have bought something through mail-order at some time. Mail-order is sold through part-time agents. The order is taken in the home and delivered to the home. The transmission mechanism for information and goods is the post and parcel services respectively.

Until comparatively recently the agent rarely contacted the mail-order house and vice versa except by post. But changes are in the wind.

The first change is change itself. No sooner is a catalogue printed than it is out of date. Bearing in mind the mammoth cost and extended timescale of producing a catalogue, it is not surprising that editions are kept to a minimum. But how does one cope with the changes - price changes, size changes, specification changes, insertions, deletions, availability changes? The only answer is that, with good organization, one copes with difficulty.

Telephone traffic between agent and mail-order house is escalating and mail-order houses are looking at new ways of communicating with both their agents and their customers. Part of that communication may well be videodisk for the static catalogue material particularly photographs and videotex for ordering and for up-dating prices and availabilities. Low-cost systems will soon be available that combine videotex, personal computer and videodisk so that teletext characters can be dynamically overlaid on a videodisk picture. Thus new prices can be collected by telephone using videotex and overlaid over the appropriate catalogue information on videodisk as the videodisk is played. Prestel is a good mass publishing media for limited amounts of text and would be suitable for text up-dates of this kind. The crucial point is that videotex combined with videodisk makes a powerful new communication system albeit another variant of the extended television.

If one looks towards the 1990s, combining technologies becomes more promising for videotex. Two of the disadvantages already noted for videotex - expense, poor graphics and currently no photographs - disappear if the telephone line is replaced by a Cable TV connection. Such a connection would provide more bandwidth enabling still colour photographs to be reproduced quickly and cheaply on the home television. Moving pictures are also possible but are likely to be expensive.

Home teleshopping on Cable TV systems are likely to be a mixture of Prestel-style working, more conventional television shopping magazines and new tele-small ads. Prestel-style would keep the 'modus operandi' of videotex but use the Cable rather than the telephone line for communication with the appropriate computers which would probably be

privately owned and operated. Shopping magazines would be television advertising programmes where at the end of the programme the consumer would switch the television into interactive mode to order the chosen goods. Tele-Small-Ads would be a teletext-style service of classified advertisements where the consumer could browse and order. Some 150,000 pages of information could be held in a database and a page could typically be accessed in a second or two.

Teleshopping is always linked with Telebanking, because somehow one must pay for the goods. Doubtless retailers will construct credit and budget account terms for customers but large numbers of customers will want to pay cash, even if it is electronic 'cash'. At the same time, the banks would very much like to reduce paper transaction volumes because of excessive expense. With both the bank and consumer of the same mind and with the retailer gaining by being paid quickly, circumstances would seem to be favourable for early moves towards electronic funds transfer for both home and shop transactions. The banks have already announced plans for electronic funds transfer at point of sale in retail shops. As consumers become familiar with such techniques, they will more readily accept them for home transactions. Clarification of consumer credit and contract laws will also be necessary and this can be expected over the next year or so.

For the 1990s, teleshopping and telebanking will appear in those areas where there are the strongest conjunctions of interests. Prediction is always dangerous but it would appear that in teleshopping there is scope for new types of "mail-order", perhaps new kinds of supermarket shopping where "chore" shopping for staples is done from the home to a cash and carry-type organization with either consumer collection or home delivery, perhaps reservation shopping for car, travel, holidays, lodgings and theatre and perhaps as a start "which and best buy" information services which tell the consumer where to get the best deal on say a dishwasher in the locality.

The rate or pace of introduction of these new services is dependent upon a number of factors, the most important of which is cultural. It is hard to imagine older members of the public using them. The market is largely today's ten year old in ten years time.

The second factor is the growth of catalyst organizations that will bridge the electronic communication gap between say consumer, retailer and cable TV operator. It could be that such organizations will be publicly known as for example Teledata with telephone sales or they could be super advertising/technology organizations that can put the whole package together. Such organizations will need time and money to evolve successfully.

The third factor will be the competitive situation in retailing. Will the supermarkets permit cash and carry style organizations to take their trade? Will the High Street supermarket become obsolete or will it change to entice more consumers? Is cash and carry through teleshopping likely to be cost-competitive without consumer bulk buying? Are homes big enough for bulk storage? Will the consumer invest in inventories of staples? The only bulk storage area in most homes is in the loft. Will boarded lofts and loft ladders prove a growth business?

The questions and the implications are fascinating. There is no way of knowing the answers. The groundwork for teleshopping will soon be in place and the consumer will largely dictate the pace of development.

Similarly with telebanking. The days of proliferation of retail bank branches are over. All the major banks are planning cutbacks. Automated cash dispensers are already familiar in the High Street. Soon they will be familiar in offices and factories just like vending machines.

Funds transfer in shops plus credit cards will remove the need for cash for buying goods. Telebanking is likely to start with non-transaction services such as statement perusal and standing order services. As people become familiar with talking to the bank from a home television other more sophisticated services will follow. One building society already offers such a service using Prestel terminals.

Prestel too will gradually evolve. The present heavy concentration of business usage will continue probably until the late '80s mainly with Closed User Group operations offering a unique communication system for special groups of users. It is hoped that experiments with tariff structures will continue to encourage more non-business users. The

Micronet club for micro-processor users has been a great success. But ultimately Prestel will have to decide whether it will remain dedicated to the telephone line as a distribution mechanism or whether it will embrace the coming cable systems. If the former it will wither. If the latter it will flourish.

The extension of capability to the television continues. The latest extension is the television receiver/monitor that enables the television to double as a personal computer monitor in a purpose-built system. As such it makes a good vehicle for telesoftware, software broadcast for free use by anyone. It is the beginning of a new kind of software distribution system. The addition of the personal computer and the videodisk opens the door to interactive computer-based training. This enables a student to undertake a course of instruction in tutorial fashion with the computer which scores and paces the student. The videodisk is linked by hardware and software to the personal computer and the television. It works as follows: a film sequence is shown and textual questions are asked. The student chooses optional answers. Depending on the answer chosen a further film sequence is shown and so on. With a videotex link it is therefore simple to transmit the scores to another computer so that the teacher can check the results and appraise performance. The technology is called Interactive Video and work is already underway to link it with videotex.

The essence of all these developments is that in the 1990s we will become a telecommunications-rich society. We will become increasingly home-centred and more leisure oriented. Our appetite for services will grow.

The twentieth century has seen many new services delivered to the home - gas, electricity, water, telephone and radio/television signals. The services in them created markets for new products. The products then created new markets for complementary products and other services such as maintenance. Much the same will happen with the new technologies.

Prestel, videotex, teleshopping, telebanking are parts of a new consumer telecommunications revolution alongside Cable and satellite television. There can be little doubt that this revolution will change the way we live and that these changes will be well in evidence in the 1990s.

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