Abstract: The paper focuses on the introduction of interactive digital television (DTV) in the UK at the turn of
the millennium, and its take-up and use by early audiences. It discusses whether the processes of television
technological convergence went together with ‘consumer behaviour convergence,’ enhanced audience
engagement with the interactive TV services offered, and participation. Based on findings from a UK-wide
survey and in-depth interviews with early Sky digital subscribers conducted during the early days of the service,
the article shows that early interactive DTV was taken up because of its multichannel offering and thematic
orientation and, interestingly, was approached and appreciated mostly as a television content provider. It thus
notes a divergence on industry’s attempts to promote convergence in broadcasting and on the level and pace
with which users adopt and adapt to such change. In so doing it highlights the evolutionary nature and slow rate
of change of cultural habits and forms.

Keywords: Interactivity, use habits, customisation and individualisation of viewing, complementarity, TV
programmes, screen entertainment medium

1 Convergent DTV: Early Assets and Affordances

1.1 Digital UK

In the late 90s and early years of 2000s, DTV was introduced in the UK given the planned switch-off of analogue
television and Europe-wide policies for a total transition to digital broadcasting. It was also launched as an attempt to

1 See: Horst Stipp, “Convergence now?”, The International Journal of Media Management, 1, 1, 1999, 10–13, p. 11
2 In the early years of the digital switchover, the UK was one of the leaders of the EU transition to digital broadcasting in terms of the high adoption
rates, the existence of different platforms (satellite, cable, terrestrial), the launch of interactive services and the launch of Freeview (in 2002) as the
subscription-free national terrestrial platform that would allow switchover completion. Despite setting the pace, the commitment to a voluntary
transition meant that, in the end, the UK took quite some time to fully switch to digital (in 2012) as other countries took over (such as the Netherlands,
Finland, Sweden and others) see: Michael Starks, Switching to Digital Television: UK Public Policy and the Market, Intellect, 2007. For a more in-depth
analysis of the EU DTV transition and history, one needs to look at EU countries individually -and perform a comparative analysis- given the cultural,
political and technological/broadcasting particularities of each and since, despite the common EU goal towards DTV, each country set its own
transition plan and policy. See, for example: Michael Starks, 2007; Wendy Van den Broeck and Jo Pierson, eds, Digital Television in Europe, Brussels,
converge the functions of television with those of the computer, and to potentially bridge digital divides and offer internet-like services and access across the population. In the early days of DTV services, the UK was considered the most developed market in the world. In late 1998 it was the first country with both a satellite and a terrestrial digital broadcasting service, as BSkyB launched Sky digital, the satellite service, in October 1998 and ONdigital launched the world’s first digital terrestrial service in November of the same year. With cable operators Telewest and NTL launching their digital services in 1999, DTV in the UK became available on a subscription basis on all three platforms. By the end of 2001, the UK was recording the fastest DTV penetration in the world with an overall take-up of 37%. But, what was new about this new medium and how did audiences react to it through use? This paper attempts to answer such questions based on a multiple method research -so as to achieve both breadth and depth of responses- conducted with Sky digital early adopters between late 2000 and 2002. In particular, a UK-wide postal survey using a simple random sample of 1986 early Sky digital subscribers was conducted and achieved a response rate of 35.25%. This was complemented by 15 in-depth interviews with a sub-sample of the original survey sample.

1.2 Digital Satellite TV

Digital satellite television that this paper focuses on, offered an unprecedented choice of television channels of digital quality image and sound, along with the public service broadcasting channels, bundled in a variety of channel packages (and prices) from which the subscriber could choose. Pay-per-view (PPV) and (near) video-on-demand services enabling users to record/retrieve television programmes and watch them at a time convenient to them, radio channels, enhanced or ‘contextual’ interactive features within the television programmes, and the on-line or ‘non-contextual’ interactive services of ‘Open…’, launched in October 1999, were also available. The ‘Open…’ platform allowed access to shopping, banking, e-mails, electronic games and other interactive elements. The term non-contextual is used to describe such services because, as opposed to the contextual interactive programmes/features which did not interrupt TV viewing, these operated outside the TV flow and context, and their use was taking place in a ‘new environment’ resembling an unsophisticated web interface. In the early days, these online internet-like services accessed on television were a novel feature indeed. Yet, compared to the internet they were rather slow to download and use, and the technology, graphic design and choice available could be described as rather basic and limited.

Enhanced contextual interactive services could be accessed by pressing the red button on the remote control. At the time, such services were Sky Sports Active (SSA), allowing access to match statistics, replays and highlights as well as alternative camera angles in football and other sports games and events, and Sky News Active (SNA) providing background and updated information on certain key news items, weather news etc. These features are still accessible and while using them the viewer can still watch the TV programme on a smaller ‘window.’ Numerous multi-stream enhanced interactive services attached to programmes have been developed through the years, turning television into participation television and allowing viewers to vote or participate in quizzes, communicate with the programme producers, find background information on the programme and use camera angles of their choice. These features are always thematically related to the programme watched and may have an entertainment or informative character depending on the nature of the television show they are linked to. From its early days

6 In the interview quotes form this research that follow, the gender initial (Male or Female) and age of the interviewee is used as an identification mark.
7 The subscriber could select from a variety of channels focusing on general entertainment or single-genre (thematic) channels such as movie, sports, news, documentaries, music, children’s channels as well as adult channels and specialist channels.
8 To use this service, the digibox had to be connected to the telephone line. In May 2001 the service was shut and only few of its features were integrated in Sky Active, the newly found service that incorporated all of Sky digital’s functioning interactive features.
10 Enhanced features of programmes, such as Big Brother and BBC’s Wimbledon Tennis Tournament, Walking with Dinosaurs, Football World Cup and Test the Nation delivered via Sky channel packages, were amongst the most popular in the first years of enhanced interactive DTV.
Sky digital was accessible through, what was then, the new service of the on-screen electronic program guide (EPG), a feature that has been further developed since. The EPG helped users ‘navigate’ in the new multichannel environment, also providing additional hyperlinks for on-demand information like cinema reviews, sports, quizzes, voting etc.

2 (D O N ’ T) B e l i e v e t h e H y p e ... ?

Since before the launch of DTV, the UK government had been supportive of initiatives that encouraged the development of DTV, advancing regulation and policy plans that would help accommodate the transition to digital broadcasting. Behind the UK’s keenness on DTV take-up, apart from revitalizing the electronic industry, were the gains related to the frequency spectrum that would be freed up by turning off analogue signals. This would provide the state with the source of additional revenue and opportunities for investment.11

As a number of scholars have suggested,12 in these early days the technological enthusiasm and promotional discourse on UK DTV was sweeping and deriving from a number of interest groups (the government, policy makers, market players, the electronics industry, the media). These presented DTV as irresistible and as something that would positively change our lives and television as we know it; and indeed, it can be argued that pressures from such interest groups, press promotion and advertising facilitated the impressive early take-up of DTV.13

The convergence between TV and PC, demonstrated in interactive DTV, declared major transformations to consumers’ experiences and to society. Audience fragmentation and segmentation, the participatory interactive TV user and consumers as producers of their viewing schedules were heavily proclaimed since then. But also, so were the death of television, the death of the audience, the end of watching TV as a shared experience and many other consequences, which did not necessarily materialise.

Governmental and DTV policy discourse since the 1995 White Paper on Digital Terrestrial Broadcasting was, as Mackay confirms, “congruent with the technological determinism, optimism and mythology of active consumers that characterises broader debates about new media.”14 The rhetoric of modernity and progress was invoked in the case of UK DTV, as is often done during the introduction of new media.15 DTV was rhetorically ‘constructed’ as a vehicle of ‘change’- which is always meant to be positive.

As I discuss next however, the examination of DTV early adopters’ consumption practices shows that, notwithstanding fast take-up and this rhetoric of progress and change, the use of DTV - a hybrid medium that offered both old and new type of services and experiences - was somewhat conservative and not all its new services were appreciated. Those features related to DTV online interactivity did not attract early audiences substantially. I show that regardless of the hopes and expectations invested in the ‘immediately transformative power’ of this new medium,16 reality did not live up

15 See for example: Herman Galperin, New Television, Old Politics: The Transition to Digital TV in the United States and Britain. Cambridge University Press, 2004, on the Thatcher Government rhetoric during the introduction of analogue cable and satellite television; also: Sheila C. Murphy, How Television Invented New Media, Rutgers University Press, 2011.
to them as (fast as) expected. In this sense I note how, although it might have seemed (pre)determined the early meaning of DTV was socially constructed also through use.

3 Early Interactive DTV: Multichannel TV, Tool or Toy?

My research shows that despite hype, promises and realities of convergence and of interactivity on TV, the most common reason why participants took a DTV subscription was the increased channel choice it offered. Choice of channels and digital picture and sound were the first and second most popular reasons why subscribers decided to ‘go digital’ (Chart 1). Thematic programmes and the increased availability of sports and films were also important, and featured as the third and fourth most important reasons for a DTV subscription. It is clear that, since deciding about getting the service, DTV users appreciated DTV mostly as a TV content provider and embraced its potential for customising viewing. On the contrary, their decision was not influenced by the interactive features available. Interactive services such as shopping, banking, emails and electronic games on TV were important for taking up a subscription for about only one in ten participants. Some respondents considered interactivity a nice to have added feature on top of their increased channel and programme choice, but a secondary only reason for subscription. In all, at the point of decision, the early DTV audience in the UK perceived DTV as an improved medium that would provide them access to more television content and more content of their taste.

3.1 ‘TV is for Watching TV’

As regards viewing preferences we see that, aside the availability of new channels and content alongside the reasons for subscription that centred on choice, picture quality and access to more sports and films (Chart 1), early DTV users continued to prefer the long-established terrestrial channels (BBC1 and BBC2, ITV, Channels 4 and 5) (Chart 2). Thematic single-genre channels were also amongst the favourites, as users appreciated knowledge and documentary channels, movie channels and sports channels. Approximately half the participants also liked general entertainment channels; and thematic channels such as news and music channels followed (Chart 2).

17 This finding is consistent with Cumberbatch et al. (2000, p. 9) who at the time showed the continuing popularity of terrestrial PSB channels for all viewers. See: Guy Cumberbatch et al., Television: The Public’s View 2000. An ITC Research Publication. The Communications Research Group, ITC.
In relation to preferences for specific types of content and genres, feature films were the favourite type of programme for most respondents, followed by comedy series and sports programmes.\(^{18}\) So even if DTV users were bombarded with a variety of programmes and genres, they seemed to show a clear preference for films and sports; types of content that have always been alluring to audiences.

Overall, aside from the variety of channels and programmes, Sky digital subscribers ended up mostly sticking to the mainstream and popular ones, the ones they had always watched. This persistence and longevity of particular viewing habits evident in my survey, is also confirmed by other research.\(^{19}\) Yet, my findings also suggest a trend towards DTV viewers’ preference for thematic channels (though even mostly mainstream ones such as movies, sport, documentary and news), users’ forming willingness to customise their viewing and their newly found ability to form their personalised media diets.\(^{20}\) Consequently, although general television viewing behaviour and preferences did not change radically, important subtle changes and interesting trends can be detected in these early days of DTV.

### 3.2 ‘TV Is Not a Computer’

In relation to questions about the acceptance of interactive television services and their use by the early DTV audience examined, the survey findings suggest that the majority were not keen to take up such interactive offers on their television. The most non-contextual online interactive services of ‘Open…’ did not engage users at all. As Chart 3 shows, early DTV users were completely disregarding the TV-banking service, and indifferent also to emailing via the TV set. They were a bit more appreciative of the shopping online service, and showed more support towards electronic TV games, which were the most successful of such online interactive services. Still, it was clear that respondents did not use TV as a computer and were rather unwelcoming of such an option. The primary reason for such a response was that, at the time, in people’s minds television was associated with relaxation and entertainment, and the internet on the computer was perceived mostly as a working or administrative tool associated mainly with communication, information

---


seeking and gathering. DTV was considered an easy to use laid back medium, whilst the internet required a more active mode of engagement. As the following computer literate DTV user said:

Hm, I mean…we have four different ways to access the internet from this house, but we only use one, because that’s the job of the computer. And that’s what you do over here at the computer…The job of the TV is entertainment. (F. 34)

Similarly, another participant elaborated on his view of the two media:

I think the whole internet factor is set up for communication and interactivity. Television isn’t. It’s tanked on at the back and it’s not the primary entertainment factor in effect. When I want to come and sit down and relax, I’ll come down and sit down and watch the television. I can’t relax if I use the computer. That’s the difference, I think. (M. 43)

It is clear that set perceptions about the functions of each medium and established habits and patterns of use formed the primary grounds why in those days early UK DTV users did not like to cross over between the two media or use them interchangeably. The following quote is most revealing of why this merging of the TV with the computer under the online non-contextual DTV services was not inspiring users at the time:

Probably I just can’t be bothered…I have no interest in doing it, you know? Because I have my own computer anyway, I email and I use that. I don’t do banking on there. I have my own bank. Well I don’t have my own bank but I use a bank anyway. Normal ways, you know?…Well the computer is there if I need it, hm, the television’s there for the use of watching it. But any bits and pieces that go along with it, I don’t really need to use…I know as time goes on, you can and will be able to do a lot more with it, but, hm, I just use it for what it is. (M. 54)

The technical difficulties and crude development of such infrastructures was another important reason for non-use, along with the fact that the more efficient alternative of the internet on the computer was there available to them. As the following two interviewees explained:

We’ve used PPV interactive services and I still use PPV movies. The other interactive services [means non-contextual] we tend not to use…I found them very slow, very time consuming to load…and when you go on-line they are very slow to connect. So to be honest, if I was going to do something like that, I’ve got a computer, it’s got internet connection, and it’s so much quicker, so I would use that. (M. 29)
Well it seems odd to me, I suppose, to use the TV for everything. I could work my way around it. You know, I could use that…but I do think it’s still limited in comparison to going on to the computer and on the web.

(F. 35)

3.3 Pressing the Red (Active) Button

Enhanced interactive services were treated a bit differently. A reasonable share of users found them appealing and, over time as they developed more, these services gained audiences that would ‘press the red button’ so as to interact with the TV programme, participate21 and elevate their viewing experience.

From the enhanced services available at the time of research, SSA was the most appreciated (Chart 3), while SNA was also well received as the interviews confirmed. This following user, for example, explained:

Analogue was quite boring…You didn’t have an Active button…you didn’t get none of that to get the latest news. I use the Active red button to check up on things. I did watch quite a bit of CNN when the twin towers were hit. I watched Sky News and CNN. I couldn’t leave it. I couldn’t leave it…I use the Active red button to check up on things, but I don’t really use the interactive [means non-contextual online services]…I don’t know why. I think that’s cause I’m too busy watching my programmes. I couldn’t be bothered I think.

(F. 52)

Whilst another participant commented on the use of enhanced contextual interactivity:

I think it’s brilliant…because…I think we’re all information junkies and the more information you get the better. And I just feel it does enhance the experience. It’s much more fulfilling than just a basic type of programme…it makes it slightly more three dimensional. It’s very easy just to watch a flat screen, switch on and off and you probably fall asleep. But this way it gets you more involved and in the end you get more out of your viewing.

(F. 46)

Other types of services such as PPV and radio were moderately popular, considering these early days. Approximately half the participants were using PPV with different frequency,22 which, again, indicates a certain readiness to personalise their viewing and hints at the later success of on-demand and catch-up TV. The use of radio was considerable as well, given the early days of the service (Chart 3).

Overall we can conclude that, interestingly and despite original aspirations and expectations, the use of interactive services by early Sky digital adopters was rather limited. My respondents adopted a conservative stance towards DTV, approaching it mostly as multichannel television of an upgraded form. Yet, they did seem to like the enhanced interactive features incorporated in their favourite programmes because they felt these improved and enriched their viewing experience.

I would thus suggest that change does not usually or necessarily correspond to anticipated or expected changes that the industry and media promotional discourse proclaim. Early DTV in the UK did not produce the converged interactive user and did not merge in user perceptions and behaviour the functions of the television and the PC or internet. But it did bring audience emancipation through choice; and viewers who customise their viewing via the many thematic channels, the enhanced contextual interactive features and PPV initially, and via Digital Video Recorders and other

21 Although, as Wood (and in fact as Reception Studies scholars) would argue, in terms of sense-making and response to TV content, audiences did not need to wait for DTV or new online media and technology advancement to become active and participatory. They could always be active and interactive with standard and common TV forms and genres as, for example, Wood’s research on how audiences engage with and talk back to television while watching talk-shows indicates. See: Helen Wood, Talking with Television: Women, Talk Shows and Modern Self-reflexivity, University of Illinois Press, 2009.

features introduced at later dates. Such an observation can be made in hindsight and with knowledge of what has happened since the launch of DTV; yet, indications were clearly there as I discussed.

4 Evolutionary Change

The discussion so far shows that DTV was taken up because of its multichannel offering and its thematic orientation and thus was approached and appreciated mostly as a television content provider. Adopters approved of greater choice and individualisation of viewing, but were relatively unimpressed by the most innovative features of the new medium in the decision to ‘go digital.’ This behaviour is largely attributed to the early technical limitations of DTV as an innovation. Crucially though, it is also attributed to the power of television and persistence of viewers to regard it as a screen entertainment medium; to the power of habit and, ultimately, to the evolutionary nature and slow rate of change of cultural habits and forms.

As Couldry explains:

Our habits are not isolated but fit together in the much larger weave of habits which make up our daily lives… That is why media habits, such as watching television, often considered in isolation, change more slowly than media hype claims: they are woven into a wider set of habits.

The case study of the early circulation and use of this new medium shows also that, despite initial intentions, expectations and hopes, convergence after all is not about merging a set of different media into a single one, or about integrating the functions of one medium into another in order to substitute and replace it. Features of one medium may be attached to another but need not and cannot necessarily replace it for the reason that use habits, mind-sets, perceptions and use contexts largely shape media consumption. Convergence, as Dutton and Helpser and other scholars suggest, is about complementarity rather than substitution.

Indeed the convergence of television with functions of the computer and the internet, in the form of the early interactive DTV discussed, did not replace any of these media or significantly change media habits overnight. But truly also, with the introduction of DTV at the turn of the century, television slowly began to move from a linear to a more participatory or two-way mode of broadcasting. Indeed, users began to intervene in the broadcasting process and turn DTV to a consumer driven medium by constructing their personalised viewing schedules; indeed DTV began to take on some of the functions offered by the internet; and the way television is used has gradually expanded. Today the internet is taking some of the function of TV, as TV content is increasingly available online also as a result perhaps of the not so overwhelming impact of interactive services on DTV. Netflix, Hulu and other online streaming video on-demand services are increasingly gaining audience support. Such developments illustrate “the complex media environment that we now inhabit, an environment built on both broadcast and broadband.” Convergence is becoming ever so complicated and innovation is continuously taking place in the media industry, development and production. Yet, as Murphy points out...
also, many new media lean on older media for their content and form,\textsuperscript{30} and convergent media after all are not the product of a revolution but are based on longer historical trajectories, as Meikle and Young\textsuperscript{31} also suggest.

From the consumption and user perspective, and to go back to the early days of DTV in the UK and conclude, we should again note that most of the extravagant claims the introduction of DTV was accompanied by were either premature or did not take shape. This observation is not to undermine the novelty value of DTV or of new media in general, but rather to pinpoint to the continuities between the old and the new,\textsuperscript{32} and to the slow or gradual rate and evolutionary nature of change of use patterns. It highlights the mismatch between early inflated expectations and claims to imminent change a new medium proclaims when it is introduced, and the actual uses and identity it acquires through its life trajectory. Clearly, consumption and audience practices need to be taken into account when studying the introduction of a new medium, and through the years, for these largely contribute to its social shaping. Media technologies are surrounded by social processes and “the time scale of technological development differs from that of social change” as Livingstone attests.\textsuperscript{33} Thus, we need to follow a medium/technology through its life trajectory and study its diffusion and adoption as a social and historical process.

\textbf{Biography}

Vivi Theodoropoulou holds a PhD and an MSc in Media and Communications from the London School of Economics and Political Science and has published on new media convergence; digital television audiences; and sports fan practices. She is interested in continuity and change and new media histories and evolution within our transforming media ecology; also in new media technology use, participatory media, and cultural forms’ consumption as a means of identity construction - thus her interest in mediation, changing audiences and (prod)users in general, and fandom, sports and niche audiences, in particular.


\textsuperscript{32} Also see: Graham Meikle & Sherman Young, \textit{Media Convergence: Networked Digital Media in Everyday Life}, Palgrave Macmillan, 2012.

\textsuperscript{33} Sonia Livingstone, ‘New Media, New Audiences?’, \textit{New Media and Society}, 1, 1, 1999, 59–66, 61.