

Attracting the un-served audience: the sustainability of long tail-based business models for cultural television content

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ABSTRACT

Digital television services not only provide promises for interactive services, but also for long tail-based business models in terms of tailor-made content. As the share of culture in total linear television programming is diminishing owing to the supremacy of audience rating concerns, digital television services could act as an alternative gateway to deliver culture to a wider audience. This paper presents the results of a market pilot study using the established video-on-demand (VOD) platform of Flanders' main digital television operator for the wide-scale delivery of performing arts videos. Despite the promising pilot study results, we doubt whether the long tail principle is applicable to the delivery of avant-garde material to develop a viable digital television service.

KEYWORDS

Digital television, business models, long tail, cultural programming, performing arts, information society, user research

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INTRODUCTION

Since television's development as a mass medium in the late 1930s, television and cultural programming have been involved in a complex relationship, wherein the advantages and disadvantages of broadcasting performing arts have been widely debated (Rose, 1986). Within this context, economic and marketing issues such as limited viewership appeal and high production costs have dominated the debate and played an important role in the programming of what is known as 'high culture'. In Europe, cultural programming was traditionally seen as a major argument to legitimate the establishment of public service broadcasting (PSB), which 'should define itself as an influential factor in cultural reproduction and renewal' (Blumler, 1993: 406). Culture was of the highest symbolic value and played the lead in PSB's explicit cultural-educational mission, which has contributed to the development of national identities and civic morality (Van den Bulck, 2001). As Emanuel (1993) argues, PSB has been heavily influenced by a canonical approach to culture, attempting to enlighten citizens by providing highbrow and high-standard cultural material. As a result, PSB programming policy held onto the dichotomy between high and low culture, referring to the differentiation of aesthetic tastes and interests among intellectuals and the working class (Bourdieu, 1979), or simply the opposition between minority elitist culture and popular mass entertainment (Storey, 2001). Nonetheless, although all public broadcasting institutions in Europe are primarily based on these cultural assumptions, there is a lack of consensus on the implementation of these values in programming strategies (Blumler and Hofmann-Riem, 1992).

In the United States, the advertising-supported commercial sector has dominated the television system. In order for advertisers to attract the greatest number of people, private networks cultivated a taste for popular culture and entertainment. Lovers of the arts had to rely on the Public Broadcasting Service (PBS), previously National Education Television (NET), which established the ‘industry standard for high quality cultural programming’ (Heilbrun and Gray, 2001: 371). Riding on the wave of the booming cable television business at the beginning of the 1980s, four commercial channels were launched to offer art and culture on cable. As advertising revenues fell short of expectations, and few users were willing to pay the subscription premium, some soon ran out of business while others survived by programming less culture in favour of more movies, comedy and documentaries (Waterman, 1986). The enthusiastic spirit surrounding cultural programming was soon replaced by a more economic-competitive logic, with an emphasis on profit and audience maximisation (Atkin and Litman, 1986).

Owing to the liberalisation of the audiovisual market and the increasing competition from commercial channels since the 1980s, most public broadcast institutions in Europe have been influenced by this economic-competitive approach as well. Because of the increased focus on viewer expectations and market research, the share of highbrow culture such as opera, dance and theatre in public programming schedules began to diminish in favour of popular entertainment (e.g. Blumler, 1992; Meier and Trappel, 2007; Van den Bulck, 2007), reflecting a paradigm shift towards Raymond Williams’ approach to culture. According to Williams (1958), culture is a broader concept and should be seen as a ‘whole way of life of the people’. This wider strategy put less emphasis on elitist material, highlighting extremely mediated events such as book and movie award shows instead, and introducing techniques and formulas widely used in light-entertainment programmes and talk shows (d’Haenens, 1996; Van den

Bulck, 2007). This down-market strategy has led to a wider debate on the impact of competition on PSB, programme diversity and ‘serious programming’ in general (Author, 2004). Overall, public and commercial television schedules have converged owing to the battle for audience numbers, causing a reduction in art programming because of its small audience base. On the other hand, in countries such as Germany and the Netherlands, this competition has actually increased programme diversity (e.g. Adriaans and van Hoof, 2006; Meier, 2003).

Despite today’s dominance of market-oriented policies (Galparin, 2004) and partly thanks to digitisation, a recent return to culture can be witnessed within almost all PSB institutions (see Van den Bulck et al., 2009). In Flanders, for instance, the PSB management contract has been renewed and efforts have been made to revalue culture in the schedules, including plans for launching a digital cultural themed channel and exploiting the cultural potential of digitised archives. Moreover, the public broadcaster has invested in an online cultural platform providing interactive multimedia content (Van den Bulck, 2008). Besides the efforts of PSB, there has also been a remarkable private initiative. Alfacam, the Belgian-based company providing TV facilities and services to broadcasters, started EXQI Culture in October 2006. This digital channel offers cultural programmes with a focus on music (pop, rock, classic, opera), expanding its scope to theatre, ballet, architecture and the visual arts. It also provides a daily cultural news programme that is subsidised by the Flemish government (Theerlynck, 2009).

Although this digitisation of cultural supply challenges the public service principles of open access, universality and inclusiveness, techno-optimists argue that new information and communication technologies (ICT) might be a strong driver ‘for reinforcing Europe’s cultural

diversity by making our heritage and our cultural creations available to a wider number of citizens' (European Commission, 2005: 10). As rigid analogue broadcasting economics are hard to transcend, digital television channels could have potential as alternative gateways to deliver culture to audiences and to stimulate cultural participation among people. Because television is still regarded as the most appropriate medium for the wide-scale distribution of cultural experiences (De Wit and Esmans, 2006), experts claim that digital television services are currently starting from a pole position to distribute high-quality, full-length cultural videos with mass appeal (Verwayen, 2008). In this context, user-driven business models¹ are assumed to transform distribution scarcity into choice abundance and to generate more cultural diversity (Anderson, 2006). More critical voices (e.g. Mansell, 1999, 2003; Pereira, 2009) argue that this abundance of transmission capacity will ultimately lead to the emergence of strategies to secure a condition of relative scarcity and likeness.

This article reflects on a market pilot study using an existing video-on-demand (VOD)² platform in Flanders for the delivery of performing arts videos. The valorisation potential of cultural heritage footage will be investigated by means of an online survey among 678 digital television subscribers. Although the pay-per-view (PPV) market is generally expected to boom within the next few years (Kirstein, 2006), little is known about the current demand for audiovisual cultural heritage over VOD and its users (Verwayen, 2008). This article attempts to fill this gap by exploring the opportunities new digital economics hold for both the supply and demand of niche content. Focusing on developing strategies for cultural programming in the digital media environment, the sustainability and implications of long tail-driven business models for delivering niche content via interactive digital television services will be examined.

LONG TAIL-BASED BUSINESS MODEL FOR CULTURAL CONTENT

The current transition of the television industry is characterised by a far-reaching convergence trend that is mainly driven by digitisation. This digitisation process poses not only serious challenges for the business model and content delivery on the supply side; enhanced interactivity also allows for a fundamental shift from a traditional push to a pull strategy, responding to customers' specific demands. Interactive services entail opportunities for user participation and can generate additional revenues for content suppliers (Aris and Bughin, 2005; Slot, 2007). The digitisation of television has been regarded as an opportunity to increase growth in media production, media pluralism and more high-quality interactive services (Iosifidis, 2007). Thanks to all these benefits, the eEurope 2005 and i2010 action plans have stressed the crucial role of digital television in the further development of the information society (European Commission, 2005). Since the implementation of digital television has been much slower than expected (see Van den Broeck and Pierson, 2008), public authorities should take responsibility for stimulating viewer uptake and guaranteeing equal access to their citizens (Van Cuilenburg and McQuail, 2003).

Furthermore, it has been claimed that digital television services will offer value-added content and provide unseen opportunities for long tail-based business models, which describe a digital domain mass-to-niche product sales cycle. Particularly for a saturated market like television, creating value by appealing to specific tastes is expected to be a competitive and profitable strategy (Limonard and Tee, 2007). Owing to greater efficiency in spectrum use, more (thematic) channels and content can be transmitted, which generates advantages for citizens in terms of a wider choice and better quality (d'Haenens and Bink, 2001). This is applicable to niche content genres that are vanishing from the screen because of their small and therefore

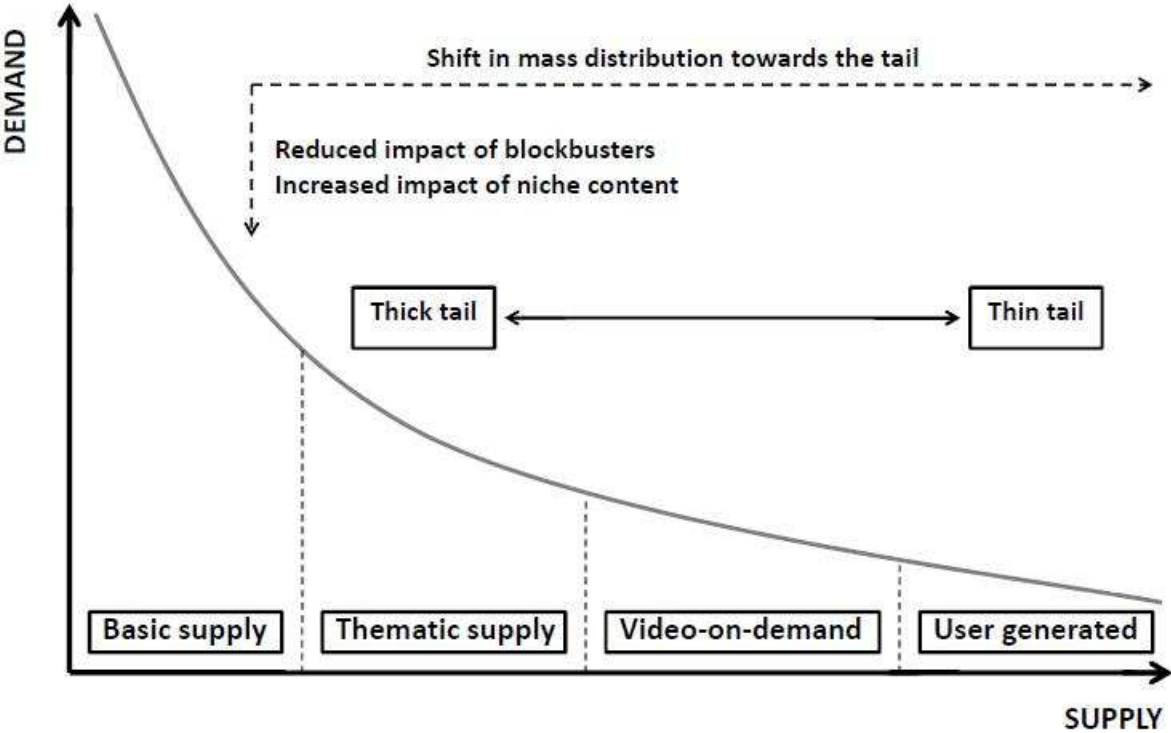
unprofitable audience sizes. With the rise of the digital economy, advocates of the growing importance of long tail effects claim that this niche content will start to play a leading role in the future (Anderson, 2006).

This long tail approach opposes the proponents of the superstar effect, who have revealed concentrated output among a few superstars, marked skewness in income distribution patterns and very large rewards at the top of these markets (Rosen, 1981). Given the low marginal cost of reproducing and distributing popular goods, the broad delivery and easy replication of popular products has become disproportionately profitable for suppliers. Since consumers find value in the simultaneous usage of consumer goods, purchasing patterns and viewing behaviour is even likelier to converge (Frank and Cook, 1995). As a result, entertainment markets are dominated by a small number of blockbusters appealing to the broadest possible audience and shaping homogeneous consumption, thus maximising ratings, advertisement revenues and returns for content distributors and suppliers (Aris and Bughin, 2005).

Contrary to this hit-focused marketplace that 'old' television economics embraces, digital television's almost unlimited shelf space may guarantee endless choice by marketing all kinds of content that was previously not available through traditional distribution channels. Whereas opportunity costs of additional channels are high for analogue content suppliers, the costs of storing and distributing content are considered to be close to zero in the digital media environment (Brousseau and Curien, 2007). It should not matter if only a small proportion of like-minded households watch or purchase this tailor-made content. As a result of these favourable economics, digital television operators have restructured their content portfolio to target niche segments, which enables them to aggregate dispersed demand and generate additional revenues. By applying the long tail principle, the provision of digital niche content

aims to suit all tastes including minority interests. This principle assumes that in the digital economy, the larger part of the revenues will be generated by the combination of several niche markets instead of mass markets. Whereas 80% of total revenues in analogue broadcasting come from the upper 20% of the items, Pareto’s distribution law is assumed to be reversed in digital media economics (Anderson, 2006; Brynjolfsson et al., 2006a,b). Although the long tail principle has recently been criticised (see Elberse, 2008; Elberse and Oberholzer-Gee, 2008; Foster, 2008), the theory has been validated on a variety of new media applications such as online book stores, search engines, and digital music and movie services (Anderson, 2006; Brynjolfsson et al., 2003). Until now, the theory has not been applied to digital television services.

Figure 1: Digital television’s long tail effects (based on Anderson, 2006)



Whether the provision of niche content should occur through a boutique subscription-based delivery mechanism (thematic channels) or by a downloadable distribution model (VOD), this

tailor-made content supply may enhance product quality, content variety and cultural diversity and should be profitable in the end. In terms of business models for the delivery of niche content, digital television providers face the main dilemma of choosing between relatively thick or thin tail-based business models (see Figure 1). In short, in a thick-tailed business model, content packagers aim to keep control over the supply by specialising in a limited number of niches and focusing on the quality of the content, whereas thin-tailed operators tend to lay emphasis on the amount of content and develop a revenue model based on the total number of niches.

The first marketing strategy is often applied by traditional packagers aimed at offering a richer user experience as a part of their cross-media approach in which familiar TV brands, series or movies take a central place, potentially combined with a limited supply of professionally-created niche content. This way, service providers select, moderate and manage a repository allowing users only to browse and purchase video items from the content library. By deploying a thin-tailed business model on the other hand, platform operators explore long tail effects by focusing on several specific target groups in order to maximise user participation and interactivity. In such a user-driven model, users are offered the possibility of enriching relations in their social network and, more importantly, the opportunity to publish, market and sell their user-created content (Slot, 2007). Since these platforms traditionally do not generate revenues on a pay-per-view or subscription basis, income is generated mainly by advertisements (see Limonard and Esmeijer, 2007; Limonard and Tee, 2007). As we might expect from broadcasters' programming strategies, cultural content in principle serves as a niche market attracting only a small crowd. In addition, as cultural consumers also attach high value to the artistic and recording quality of cultural material, business models for the delivery of cultural content should emphasise

professionally-generated content. Therefore, a thick-tailed niche delivery model for the exploitation of cultural content was implemented within our research project.

METHODOLOGY

Based on the established VOD platform of the main digital (cable) television operator in Flanders, a market pilot study was set up regarding the large-scale delivery of performing arts videos. A market pilot study usually involves testing by end-users in order to gather marketing data before entry into the commercial market is planned (Mowery and Rosenberg, 1979). Owing to difficult copyright negotiations, the research was carried out on the platform from May to August 2008 only, starting with ten videos including musicals, avant-garde dance, and classical and jazz recordings. In August 2008, the library was updated with five additional items. All items were priced between EUR 0.50 and EUR 2.00³, except for one short teaser, which was offered free of charge. Owing to the contemporary nature of this material, there was no specific promotional campaign other than one press release, which a major Flemish newspaper and a number of online news portals decided to use.

Prior to launching the pilot study, an electronic survey was conducted among digital cable television⁴ viewers, providing representative sample data for 678 digital households. By gauging their expectations on this content supply, the market potential for this type of content was investigated and users as well as non-users were accurately profiled. In order to avoid overestimations of an innovation's potential (traditionally based on one-question-intention questions), we applied the Product Specific Adoption Potential (PSAP) methodology to obtain a reliable segmentation forecast in terms of the size and nature of future adopter and non-adopter segments. The PSAP scale is an intention-based survey method whereby respondents

are allocated to adopter segments based on their answers to a general intention question, and respondent-specific questions that gauge their intentions towards optimal and suboptimal offerings (Author, 2006; Author and Verleye, 2004a,b; Verleye and Author, 2005). This PSAP methodology has been applied to a wide range of ICT innovations such as digital TV, 3G, mobile TV and mobile internet (Author et al., 2008; Author et al., 2010).

The PSAP methodology relies heavily on the diffusionist approach (see Rogers, 2003), which has been criticised for its lack of attention to the actual usage of an innovation (Robertson, 1984). As a result, new perspectives such as the domestication paradigm have emerged, referring to the integration of technology in the daily patterns, structures and values of users (Silverstone and Haddon, 1996; Haddon, 2006). Therefore, findings from the large-scale user survey were combined with insights resulting from the market pilot study itself. Raw secondary data tracked by Telenet, the telecom operator running the PPV platform, revealed certain types of customer behaviour concerning the use of the performing arts VOD service.⁵ This allows us to analyse the commercial value of cultural content and to verify the promises of the long tail. By combining the diffusionism-based segmentation forecast with more in-depth usage analysis, which has close ties with the domestication paradigm, the estimation of an innovation's market potential combines the best of both worlds, with increasing attention to multidisciplinary research. Relying on this interactionism approach, the article aims to provide a more holistic view of both the sustainability of VOD services for the supply of cultural programming and the actual take-up of such services among digital television households.

VALORISATION POTENTIAL

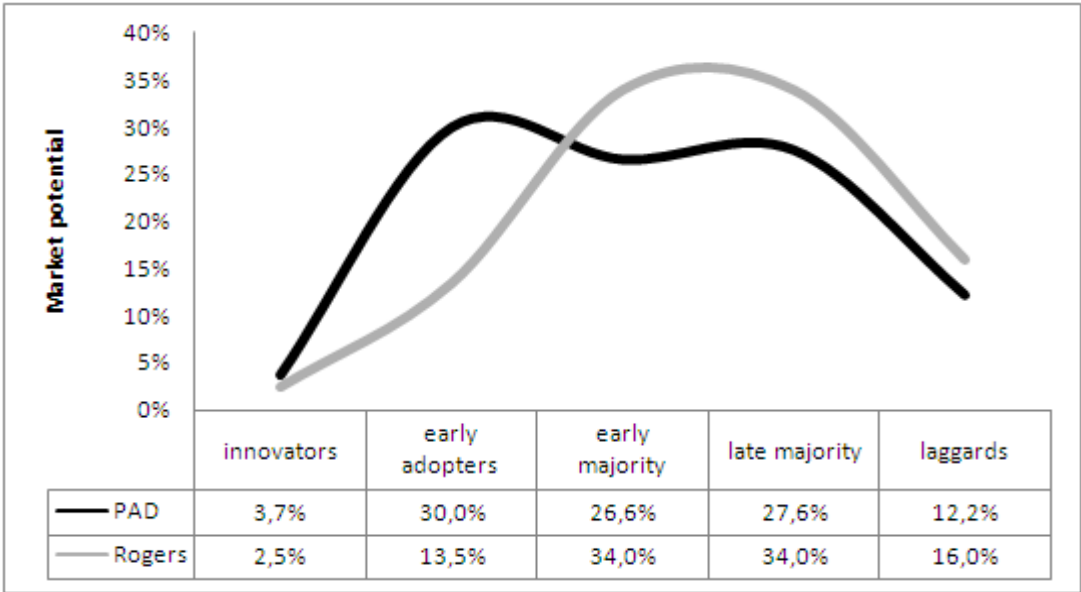
Segmentation forecast

By applying the PSAP segmentation forecast method to the stated intentions of 678 respondents, we obtained a consistent view on the size and nature of the various potential adopter segments for this interactive service (PAD). While the black curve indicates the predicted market demand for cultural niche content (see Figure 2), the grey line represents the theoretically assumed distribution pattern from Rogers' diffusion of innovations model (2003). According to this model, the diffusion of an innovation in a social system always follows a bell-shaped distribution, in which one can distinguish innovators (2.5%), early adopters (13.5%), early majority (34%), late majority (34%) and laggards (16%). The segmentation forecast governs the potential market for such a PPV supply and indicates a realistic 'partial market potential' among one third of the digital cable television households in Flanders in 2008. Only 3.7% of the respondents were revealed as innovators, or as a segment that would immediately subscribe to such a service as soon as it became available. Another 30% were detected as early adopters, a large segment that would probably not be among the very first to adopt, but whose need, interest and willingness to pay would be significant enough to expect them to adopt shortly after the innovators.

However, these figures should be put into perspective since the sample only represents the more innovative part of Flanders that has already adopted digital television. The survey was conducted at a moment when digital television was in the transition stage between early adopters and the early majority, when approximately 800,000 households had access to digital television services, of which approximately 500,000 over cable when the survey was carried out (summer 2008). In other words, these figures are only representative of the more innovative portion of Flemish television households that had already adopted digital

television. As digital television may move into households with more technology-averse people going digital in the future, this short-term potential of innovators and early adopters is likely to drop. Nevertheless, this potential estimation reveals a substantial short-term ‘partial market’ potential for on-demand cultural content. Indeed, we identified a very interested and fairly innovative front part of the market for interactive cultural content in terms of two segments that are likely to take up the service rapidly, especially for practical, social or economic reasons.

Figure 2: Segmentation forecast (general)



We discovered that an even larger market potential may be possible, although it would be risky to build a sustainable business model on it. In the social process of distributing new technologies, innovators and early adopters are seen as trendsetters, whose behaviour is copied by less innovative segments such as the early and late majority in ideal situations (Moore, 1999a; Parasuraman and Colby, 2001; Rogers, 2003). In order to reach a mass market, a crucial moment in the adoption process is considered to be the transition period or copying behaviour of early adopters towards a critical mass, starting with the early majority

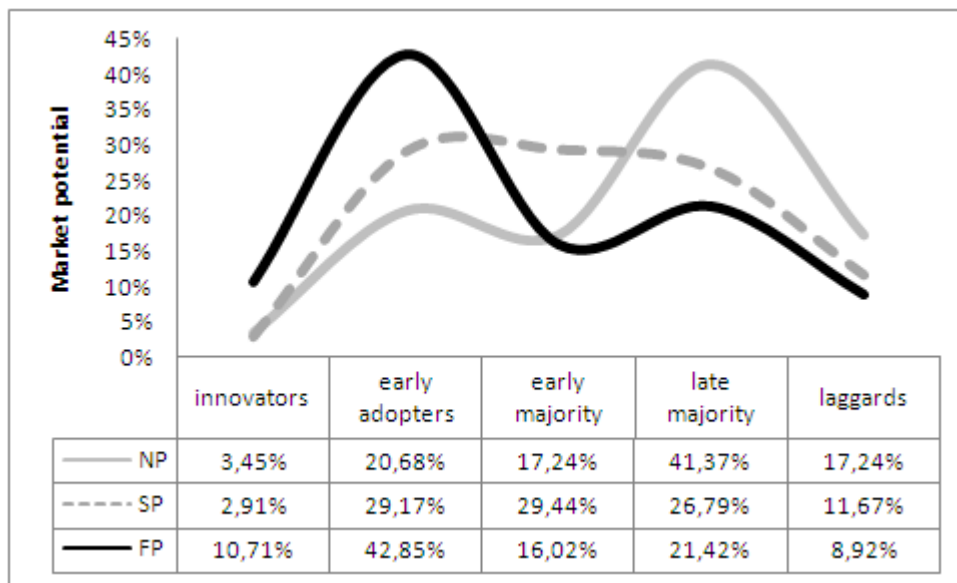
which is a vital segment in the application of a full market approach. Therefore, it is necessary to keep the majority's expectations in mind from the early introduction of the innovation, and to propose the technology in such a way that it can leverage added value for all the proposed segments (Sowter, 2000; Mundorf and Westin, 1996; Takada and Jain, 1991). When a technology does not proceed to convince the less innovative segments or does not succeed in crossing the chasm (Moore, 1999a) between early adopters and the early majority, the market remains limited to the innovative segments, as was the case with many innovations such as WAP.⁶ If these segments in front of the chasm are fairly small-sized, innovations end up failing and may have serious commercial and financial implications. However, when these segments are of a substantial size, a business model can be developed to reach the full market.

In this case, some decrease in potential is observed when comparing early adopters (30%) versus the early majority (26.6%), and a substantially lower interest and willingness to pay among the early majority. Therefore, some kind of 'chasm' (Moore, 1999a,b), 'ravine' (Lennstrand, 1998) or 'saddle' (Goldenberg et al., 2002) may be expected when launching the service. Assuming the totality of digital cable households as the potential target market for this supply, this implies that full market acceptance may not be that obvious. Owing to the large number of leading adopters, transition from these innovative segments towards the majority of the market is doubtful. One can easily imagine the difficulties in trying to persuade culture-averse people to watch this content. Other people may have financial or even technological reasons for not using new technologies. As we have concluded from our survey, 20.3% of the respondents indicated they were unaware of digital television's interactive VOD features, while almost 45% of the respondents never use these VOD services. However, the actual size of the market will depend on the particular introduction strategy and future competition from other providers (via digital television but also via alternative distribution

channels such as the internet). As the name of the method suggests, the Product Specific Adoption Potential only forecasts the adoption potential of a new technology and not its future sales. The extent to which content providers can realise this forecasted potential will thus heavily depend on marketing decisions such as price, content and communication efforts.

Without going into too much detail about the particular profiles of the various (non-)user segments, we shall analyse to what extent cultural participation has played a decisive role in consumers choosing to try out and enjoy this cultural content-on-demand service. Cultural participation refers to the overall degree to which people endeavour to find out about cultural products or events, purchase cultural goods (e.g. books, CDs, DVDs, tickets, etc.), watch audiovisual cultural content (on television or the internet) and participate in cultural events. Based on these four variables, a new variable was computed classifying all respondents into a limited set of cultural consumption profiles. Three distinctive categories grouping together people with similar cultural consumption patterns were drawn up (see Lievens and Waeghe, 2005). According to the frequency with which people enjoyed cultural material over the last six months, three types of cultural participants were identified: (1) non-participants (NP) with almost no participation at all; (2) sporadic participants (SP) with participation limited to a maximum of two items per six months, and (3) frequent participants (FP) having enjoyed culture at least on a bi-monthly basis.

Figure 3: Segmentation forecast (cultural consumption)



As Figure 3 shows, the adoption potential for this interactive cultural content is undoubtedly the highest among frequent participants, which is equalled by culture lovers. Considering the early adopter segment, in particular, and given the largest proportion within the innovator segment, frequent participants are most likely to take up the innovation or at least try it immediately. The opposite is true for non-participants, the so-called culture-averse, who seem to have little interest in the culture-on-demand supply. This is exemplified by the fact that only one quarter of this category belongs to the most innovative segments. Last but not least, sporadic participants, who make up approximately 80% of our survey sample, remain rather inconclusive about the content although the proportion of early adopters is still considerably high (nearly 30%).

Long tail-based business model

Research data provided by the telecom operator involved in this project enabled us to gain insight into actual market demand during the survey. Owing to privacy concerns, no

information about the socio-demographic profile of these users could be tracked, hence, only macro-level data was obtained. Table 1 provides an overview of the actual purchase of each library item. As mentioned above, the survey began with ten performances, including the seven-minute ‘Body, body on the wall’ that was free of charge. Despite the lack of publicity, nearly 900 people requested this short teaser during the first month, while the other productions performed by Ultima Vez, the dance company founded by the famous Wim Vandekeybus, also drew attention. In August, a number of other Ultima Vez performances were added to the library.

Following the success of the free teaser, the high ranking of the majority of Ultima Vez productions (four times in the top five) – most of them were available for one month only – show that well-known performers and productions are a driving force behind the consultation of content services. This is especially crucial when targeting a broader public beyond the culture-minded, highly-educated and high-earning audience that is often associated with participation in the avant-garde arts. For this reason, the popular musical ‘Cyrano de Bergerac’, which proved to be one of the most viewed items, was also included in the video library. However, since the majority of items were retrieved free of charge, we cannot ignore the fact that few users were willing to pay. Another major conclusion that can be drawn from these results was the declining interest in the items during the trial. While there were more than a thousand consultations in the first few months, this amount had nearly halved by August. Nevertheless, the increasing figures in demand for August compared with July demonstrate that more content supply possibly leads to more demand. Therefore, providers have to manage their portfolio in such a way that the supply is gradually updated in order to leverage added value for returning customers. Above all, this strategy is shown to act as one of the key factors for the success of VOD platforms in Flanders.

<i>Performance</i>	<i>Performer(s)</i>	<i>May</i>	<i>June</i>	<i>July</i>	<i>August</i>	<i>Total</i>
Body, body on the wall (free)	Wim Vandekeybus	889	578	426	355	2248
Blush	Ultima Vez	55	22	18	21	116
Cyrano de Bergerac	Various artists	17	16	13	17	63
Roseland	Ultima Vez	25	17	10	6	58
La Mentira	Ultima Vez				31	31
In spite of wishing and wanting	Ultima Vez				30	30
Flemish Jazz Meeting 1	Various artists	5	8	7	1	21
Silver	Ultima Vez				19	19
Harmoniemesse (Haydn)	La Petite Bande	4	4	4	3	15
Lecture Josse De Pauw	Josse De Pauw	6	4	2	2	14
Dust	Ultima Vez				14	14
Symphony n° 41 (Mozart)	Anima Eterna				11	11
Flemish Jazz Meeting 2	Various artists	1	7	1	1	10
Et ecce terrae motus (Brumel)	Huelgas Ensemble	3	5	1	1	10
Lecture Sidi Larbi	Sidi Larbi	0	1	1	1	3
Total		1005	662	483	513	2663

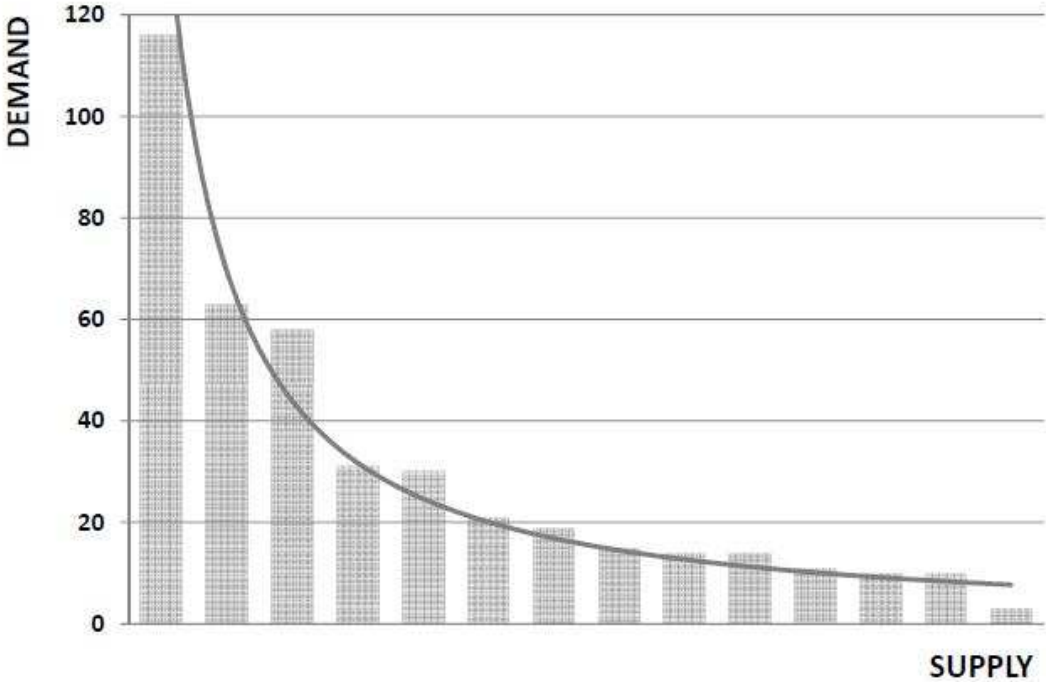
Table: Number of performance consultations

Although these low figures may initially be disappointing, we believe these results support the rather optimistic market forecast. The pilot study serves as confirmation that there is indeed a (small) public interested in watching and paying for performing arts on television under certain conditions (16% of all transactions were paid videos). Of a total of approximately 500,000 digital cable households in Flanders, a considerable proportion of the forecasted innovators was reached although it is unrealistic to expect to achieve the market potential within four months alone. This is especially the case when running the study during the

summer months when audience viewing figures are considerably lower compared with the other months of the year. The timing of the product launch is thus essential in order to achieve considerable market penetration.

Furthermore, owing to the content service’s temporary character, neither the telecom operator nor the cultural institutions involved significantly promoted it. It would seem that the impact of marketing, advertising and promotional strategies should not be underrated when launching new consumer goods. Both content aggregators and cultural institutions have an important role to fulfil. Besides close co-operation, both can raise product awareness among their target audience (subscribers, customers, etc.) by efficient communication about the supply. Therefore, the extensive profiling of users through segmentation forecasting provides communication specialists with valuable input to set up (micro)segment targeting and marketing campaigns to reach the target audience(s) more efficiently.

Figure 4: Long-tail patterns



As our results suggest, the usage of the cultural content obviously serves a niche market and shows a number of typical long-tail features. First, the culture-on-demand supply should indeed be considered as a niche market. During the four-month long study, a total of 2,663 videos were ordered. However, the total amount of video purchases was actually 415 since the free teaser was requested 2,248 times. Given the fact that the VOD market in Flanders is booming, with Telenet selling more than twenty million videos (especially television programmes, series and movies) in 2008, this clearly exemplifies culture-on-demand as a niche supply.

Despite the fact that the performing arts supply should be regarded as niche content, we also witnessed long-tail effects within this niche content supply. Figure 4 provides a brief overview of all 415 videos that were purchased during the survey (ranked the same way as in Table 1). As illustrated, some videos turned out to be much more popular than other recordings as some of them were purchased more than a hundred times, while other items were sold only three times. Although these figures already relate to a niche content supply, they clearly indicate that there are different kinds of niche content, ranging from content with substantial demand to content with almost no audience at all. As a consequence, there are an increasing number of titles that rarely sell at the end of the tail. However, in the study, the long tail principle did keep one of its major promises since all items in the cultural content supply were sold at least once. However, by aggregating all the content provided in the tail, all these items should represent a substantial share of the total demand side according to the long tail paradigm.

Although full market acceptance may not be obvious, the aforementioned results show that a substantial part of the digital television market is interested in cultural content. Nevertheless,

commercial aggregation of cultural content in the tail is highly uncertain. As VOD providers are facing high sunk costs (investments in network technology, content acquisition, etc.) and operational costs (bandwidth consumption due to content storage and distribution, billing procedures, etc.), it is doubtful whether this niche avant-garde content will contribute to the profitability of the television operator, which is primarily built upon blockbusters. Owing to the extremely low demand for niche goods, producers and retailers should therefore minimise the costs involved to recover production or marketing expenses (Elberse, 2008). Since reversing the old Pareto principle has proved to be unrealistic owing to the ever-increasing success of blockbusters, this pilot study provides mixed evidence for deploying long-tail effects for digital television services. After all, our pilot study aimed to investigate the valorisation potential of new emerging technologies, such as interactive digital television as an alternative distribution method to communicate cultural performances to a wider audience. Although the cultural and educational value of these archives can hardly be overrated, we have found that prospects concerning the commercial surplus value of this type of archive footage for B2C as well as B2B purposes are highly uncertain.

DISCUSSION

In many European countries, governments have stimulated the development of digital television because it is considered a crucial element in further establishing the inclusive information society. This discourse has been driven by a strong belief in the technological and economic potential of digital broadcasting. This almost euphoric view is shared amongst the followers of technological democracy, the notion that interactive media contribute to ‘an increased autonomy, freedom of choice and new possibilities on the part of the citizen-user’ (Van den Bulck, 2008: 337). Thanks to the evangelical belief in digital television’s affordance

as a motor for democracy, national as well as European authorities are pushing citizens to go digital as soon as possible. Within this context, Europe is urging all Member States to switch off analogue terrestrial television signals in order to stimulate the rollout of enhanced digital television services and to exploit the opportunities being offered by the digital dividend. In addition, the establishment of digital television markets is further boosted by the provision of unique and appealing content, as it creates yet unexplored opportunities for delivering content genres that were excluded from the analogue supply because of their small and unprofitable audience sizes.

Although this digitisation of television is often hailed as revolutionary for today's content delivery and consumption, the majority of households are reluctant to switch to these digital television services. In their attempts to convince these viewers to migrate to digital services, television platform operators aim to provide an appealing and exclusive content range. This supply consists of a basic package enriched with thematic channels, which are only accessible by means of a digital decoder. Television operators are keen to offer attractive content on premium and on-demand channels that are exclusively available to end-users paying an additional fee. These subscription and pay-per-view channels are considered key drivers for digital broadcasting, which may favour niche channels and on-demand programming (Callanan, 2004). Bardoel and d'Haenens (2008: 354) argue that 'thematic channels will change the function of open channels into showrooms for thematic channels and on-demand platforms' with television operators likely to encrypt all popular content for conditional and paid access. This emerging 'pay-per society' (Lillie, 2005: 44) or 'premium rate culture' (Goggin and Spurgeon, 2007: 755), in which the free lunch of commercial programme content is an anachronism (see Anderson, 2009), implies that only the elite can afford full access and control of programme content in the digital broadcasting world.

However, these forces of digitisation and convergence are threatening key public values such as open access and universality, which raises concerns about digital exclusion. On the one hand, these public service principles should be applied to all digital media applications; on the other hand, limiting public value in digital media should enable service providers to develop viable businesses. Steemers (2004) argues that the distinction between commercial and public approaches is not obvious since public service broadcasting values have moved from a cultural-educational to an economic-competitive logic. This has resulted in tension between commercial imperatives and cultural citizenship. Hence, the position of cultural programming in digital technology should deserve special attention, as shared (national) culture is considered vital for active citizenship (see Couldry, 2006). As a result of pressure from various stakeholders, cultural policies toward digital television services vary per country. In the case of Flanders, public service broadcasting (PSB) plays a meaningful role in pay-per-view archive content, while its cultural channel is locked behind a digital decoder, thus potentially breaching the PSB goals of open and equal access. By returning to culture with the launch of a thematic channel catering to certain minority tastes and interests, the universality requirement is met (Van den Bulck, 2008). Still, this sharply contrasts with the British BBC, which respects the public service values by providing its digital thematic channels (universality) on free-to-air digital platforms (open access). Moreover, the BBC claims to make all its archive content freely available to other digital platforms under the copyleft Creative Archive Licence. This initiative is regarded as ‘a powerful ethical alternative to the pay-per regime of marketisation and a potential basis for a global cultural commons’ (Murdock, 2004: 35). However, the emerging commercial approach towards public service values in the digital domain indicates the further need for policy to ensure that socially and

culturally valued broadcasting content remains universally, equally and freely available to the citizen-consumer.

NOTES

1. Long tail-driven business models rely on the fact that the larger part of digital service revenues are derived from the total number of niche markets instead of the mass market.
2. Video-on-demand systems refer to the delivery of video content over a broadband network to the individual viewer. It allows users to select, watch and pause video content whenever they please.
3. Regular prices for on-demand content range from EUR 2.95 to EUR 6.95. To attract a critical mass to this highbrow content, prices were lowered for this contemporary market pilot study. Besides this price setting, the research design was developed independently of the telecom operator.
4. In Flanders, digital cable television has a penetration rate of approximately 35% of all households.
5. We received an overview of total transactions, including date and sum of revenue. The aggregated data was not manipulated in the writing of this article.
6. WAP (Wireless Application Protocol) failed to become the international internet standard for mobile phones.

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