When a TV channel reinvents itself online: Post-broadcast consumption and content change at BBC Three

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In February 2016, BBC Three became the first television channel in the world to close its linear broadcasting operation and instead prioritise offering its programming on-demand, via the internet. Two Danish channels – both also youth-focused – followed in January 2020 for the same reason: budget cuts. Although the effects of ending offline distribution on the size and behaviour of newspaper and magazine audiences have been investigated, this article is the first to investigate the effects on a television channel. The results show that BBC Three's audience shrank by 60–70% after it closed its linear TV channel. The intensity with which the channel was viewed was even more sharply reduced: annual viewing minutes after the switch were 89% less than the channel achieved on linear television before (and around 72% less if viewing of BBC Three-commissioned/acquired content on other BBC TV channels is included). The mix of programme genres consumed changed too, although further research is required to establish the part played by the change in distribution mechanism. This study furthers our understanding of *media platform cessation* by showing how change in the size of a media outlet's audience after ending offline distribution may be affected by the proportion of its audience that consumes it exclusively offline before; and how, irrespective of media platform, ending offline distribution seems to cause a sudden and substantial fall in the time spent with a media brand by its audience.

KEYWORDS: BBC Three, broadcaster video-on-demand (BVOD), iPlayer, media platform cessation, online-only, online television, over-the-top (OTT), television distribution.

Introduction

On 16 February 2016, BBC Three became the first television channel in the world to close its linear broadcasting operation and instead prioritise offering its programming on-demand, via the internet (Ellis-Petersen, 2016). Though it was the first, it was not the last. On 2 January 2020, two of the Danish Broadcasting Corporation's channels, DR3 and DR Ultra, followed suit (Boier, 2020), in a move that had a number of parallels with BBC Three. The Danish

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Broadcasting Corporation is Denmark's equivalent of the BBC, and the cessation of broadcasting was prompted by budget cuts imposed by the government (Franks, 2018). Moreover, the Danish channels, like BBC Three, are youth-focused. Further such moves seem likely. Helen O'Rahilly, the former director of television at RTÉ, Ireland's national broadcaster, has said that RTÉ's youth channel 'will possibly go the way of BBC Three' (Blake Knox, 2020).

Ending offline distribution, while exceptional for television stations, is more common among newspapers and magazines. Between 2006 and early 2020, for financial reasons, dozens of titles went online-only, including the magazine *Marie Claire* (UK) and newspapers such as *The Independent*.

There is limited literature on such 'media platform cessation' (Thurman and Fletcher, 2019). In the context of periodicals, one study examined the impact within the newsroom (Thurman and Myllylahti, 2009) and another two the effects on audience size and behaviour (Thurman and Fletcher, 2018, 2019). In the context of television, the history of, and rationale for, BBC Three (Doyle, 2016; Ramsey, 2018; and Woods, 2016, 2017) and DR3's (Andersen, 2018) decisions to close their linear channels have been analysed; but there have been no published studies on the audience effects on a television channel of ceasing offline distribution – a gap this article aims to fill.

Although the BBC sought to justify their decision to close BBC Three's linear TV channel with reference to 'changing audience consumption' (BBC, 2015: 2), forecasting commissioned by the Corporation predicted that the time viewers were spending watching BBC Three on live television and catch-up would primarily be 'redistributed amongst other linear channels' and, although there would be a '21%' increase in the consumption of BBC Three online, that increase, because it built on such a low base, was unlikely to have a 'material market impact' (Communications Chambers, 2015).

This study puts such predictions about the post-broadcast performance of BBC Three to the test by comparing data – on audience size, viewing intensity and programme genre availability and consumption – from before and after the channel ceased linear broadcasting. Source data comes from the UK's official supplier of television audience measurement (BARB), the long-running Touchpoints Hub Survey and the BBC.

This study estimates that BBC Three's audience shrank by 60–70% after it closed its linear channel, a much steeper decline than experienced by the channel's competitors, who have continued to broadcast. Furthermore, the intensity with which BBC Three was viewed fell even more steeply, with 86% fewer gross half hour claims (GHCs) and viewing minutes 89% less than the channel achieved on linear television before. Even factoring in the minutes viewers spent watching BBC Three-commissioned/acquired programmes on the BBC's remaining linear TV channels (e.g. original BBC Three shows *Killing Eve* and *Fleabag* were both broadcast on BBC One), the decline in viewing time was around 72%. The mix of programme genres consumed changed too, although no attempt is made to determine whether the change in distribution mechanism was a cause, given that other factors – such as changes in programme availability – are also at play.

As well as considering the implications of the findings for BBC Three and other television channels, this article discusses how they might contribute to the nascent 'theory of media platform cessation' (Thurman and Fletcher, 2019) – by revealing how change to the size of a media outlet's audience after ending offline distribution may be affected by the proportion of its audience that consumes it exclusively offline before; and how, irrespective of media platform, ending offline distribution seems to cause a sudden and substantial fall in the time spent with a media brand by its audience.

BBC Three and its reinvention online

BBC Three was launched in 2003 by the UK public service broadcaster the BBC as a free-to-air television channel aimed at 16–34 year olds. Its remit was 'to bring younger audiences to high quality public service broadcasting through a mixed-genre schedule' including 'innovative UK content' (BBC Trust, 2013: 1). The channel became known for its 'creative and edgy programming' (Ramsey, 2018: 156) and was 'popular among its target audience' (Plunkett, 2014), with, between 2010 and 2015, an average TV audience share among 16–34 year olds of 6.4%, placing it consistently in the top ten performing UK channels. By 2008 its programmes were available to watch online via the BBC's broadcaster video-on-demand (BVOD) service, iPlayer.

The freezing of the BBC's licence fee in 2010, however, required BBC Television to deliver 'savings of £250 million by 2016–17' (BBC Trust, 2014: 7). In the context of this financially challenging climate, the Corporation stated that it could not 'keep doing the same amount for less' (BBC, 2015: 1) and that in order to protect the quality of its main TV services, BBC One and BBC Two, it would eschew a 'continued salami-slicing of existing TV programme budgets' and instead close BBC Three's linear broadcasting operation, reinventing the channel online (BBC, 2015: 1), primarily through the BBC's BVOD service, iPlayer. It was said that the move would allow savings of about £50 million (BBC, 2015: 2), though the savings would in fact derive not from reduced distribution costs but from a reduced content budget, with this budget cut from £80 million to £30 million (Doyle, 2016: 699).

While acknowledging that the move was 'driven by financial necessity' (BBC, 2015: 2), the BBC also sought to frame it as 'a strategic opportunity' (2), a canny response to a 'changing TV landscape' and 'changing audience consumption' (1–2). This latter change involved a 'transition to greater on-demand consumption', with the 16–24 age group in particular shifting to non-linear viewing (2), and it was stated that reinventing BBC Three online would 'enhance the BBC's reputation with young audiences' (3). The BBC's statements on this matter involved varying amounts of positivity and pragmatism. In its more positive mode it spoke of giving the audience what it wants, and in its more pragmatic mode of giving the audience what it would put up with. Damian Kavanagh, the then digital controller of BBC Three, spoke of meeting the needs of the BBC Three audience (Kavanagh, 2014), while Tony Hall, the then director general of the BBC, spoke of the BBC Three audience as the audience most 'ready to move to an online world' (Plunkett and Sweney, 2014). There was acknowledgment that the move was 'earlier than we might have liked', with the young's adoption of non-linear viewing 'the direction of travel' (Kavanagh, 2014) rather than a fully established reality.

In the channel's new incarnation, 80% of the budget would be spent on long-form content and the other 20% on 'new form digital content', the latter including 'short-form video' and 'blog posts' (Kavanagh, 2014). The content would revolve around the two pillars of 'Make Me Think' and 'Make Me Laugh' (BBC, 2015: 24), by which was signified drama, documentary, news and current affairs in addition to 'scripted comedy' and 'personality-led entertainment' (BBC, 2015: 24–25). The BBC claimed that this represented 'a focus on the content areas which audiences tell us they value most from BBC Three' (BBC, 2015: 23), though it also involved the removal of the channel's 'popular, yet often criticized, US animation imports and factual entertainment programming' (Woods, 2017: 142). The channel's long-form content would also receive transmission on BBC One and BBC Two. Some content would appear on services such as YouTube, Facebook and Twitter (BBC, 2015).

In February 2016, the channel became the first 'in the world' (Ellis-Petersen, 2016) to cease linear broadcasting and instead prioritise offering its programming on-demand, via the internet. In its post-switch form, the channel received some critical acclaim, with the Royal Television Society naming it Channel of the Year in 2017.

Literature review and research questions

In the absence of any previous research on the effect on a TV channel – in terms audience size and the content watched – of ceasing its broadcast operation and prioritising its online presence, it is necessary to look elsewhere for guidance on what to expect.

Viewers' attitudes and intentions

One useful source is a survey (N=1,133) the BBC commissioned that asked viewers (aged 16+) about their attitudes to the proposal to shutter BBC Three's broadcast channel and how they would behave if the plans were enacted. In general terms, just 14% of respondents 'expressed broad favourability' when told about the plan (Communications Chambers, 2014: 4). In terms of their future behaviour, only 29% said they would use the revised service at least once a month, a much lower proportion than the 64% monthly reach the channel had at that time (4). Respondents were asked how they would behave if, in the future, they tuned their television to BBC Three and saw a message saying the channel was only available on the BBC iPlayer. The largest proportion (40%) said they would change channel to watch something else on TV, 27% said they would seek out BBC Three's content on the iPlayer, 23% said they would do something else and 11% didn't know (9).

Other media's moves online-only

BBC Three may have been the first television channel to cease its offline operation and prioritise its online service, but it was not the first media brand to do so. Scores of newspapers and magazines have quit print in favour of digital distribution, and there are, at the time of writing, two studies that have explored the consequent audience effects using quantitative data. The first explored the case of *The Independent*, a 'quality' British daily newspaper brand, which went online-only in 2016. The authors found that although *The Independent*'s net monthly readership rose slightly (by 7.7%) in the 12 months after it made the switch compared with the 12 months before, the annual minutes of attention it received fell dramatically, by 81% (Thurman and Fletcher, 2018). The story was similar at the *New Musical Express* (*NME*) – a weekly British music magazine that quit print in 2018 – where net monthly readership rose 27% but annual minutes of attention fell by 72% (Thurman and Fletcher, 2019).

Substitution and displacement

Although, in 2016, BBC Three stood alone among broadcast television channels in choosing to cease its offline operation and prioritise its online service, many broadcasters have, for a number of years, also offered their content online, and there are, of course, other sources of online televisual content, notably subscription video-on-demand (SVOD) services, such as Netflix, and video sharing sites, such as YouTube. A number of studies have sought to investigate the extent to which viewing online video content (including from traditional television channels) on devices such as PCs or smartphones displaces television viewing. The results of these studies may also help guide our expectations.

Taneja et al. (2012) analysed data from 2008 on a representative sample of US adults who were observed at intervals of 10 seconds for two days, with their media consumption recorded. Among the study's findings was that 'access to on-demand media … does not displace linear television viewing', which led the authors to conclude that 'linear television remains a predominant visual media source'.

Cha and Chan-Olmstead (2012) analysed data from a survey (N=388) conducted in 2009 of US adult internet users to examine the perceived substitutability of online video platforms (used to watch video in real-time via a computer) and television. Their study found that 'timely learning' and 'relaxing entertainment' were the 'most salient motives for why people watch video content' (269) and that 'the more consumers watch video content for timely learning' and 'relaxing entertainment' the 'less likely they are to think that online video platforms and television are substitutable' (269). They concluded that 'television might better fulfil consumers' relaxation and entertainment needs than do online video platforms' (272).

The first author of that study analysed the same data for another publication (Cha 2013), concluding that the 'time consumers spent using the Internet to watch user-generated video content reduced the time they spent watching television' (79). However, the study found that using television-network websites to watch video content did not affect the amount of time spent watching television (79).

Jang and Park (2016) analysed 2010–2012 diary data from the Korea Media Panel in order to estimate the extent to which different media devices – as used for particular activities – complement each other or substitute for each other. They found that the computer did act 'as a substitute for television when "watching real-time"' televisual content but phones did not (83). However, the size of the effect led them to suggest that the 'computer is not a perfect substitute for television thus the risk of cannibalization is not high yet' (83).

A more recent study was conducted by Budzinski et al. (2020) who, between November 2018 and February 2019, surveyed approximately 3,000 Germans, with the final sample biased towards young, low-income, and highly-educated respondents. Nearly half agreed that YouTube-style ad-supported video-on-demand (AVoD) services were an alternative to TV. Furthermore, most respondents strongly agreed that Netflix-style subscription video-on-demand services were a 'close alternative' to TV. However, there were 'deep differences' between younger and older respondents, and the authors concluded that, while for 'younger generations … these services represent close alternatives', older generations 'remain more focused on TV'.

It should be noted that most of the substitution and displacement studies cited above were based on data collected between 2008 and 2012 and all used data from countries other than the UK. Since 2012, the availability and quality of online video services – and the devices on which they can be viewed – have increased. Furthermore, full-scale BVOD services were available earlier in the UK than in some other countries. For these reasons it is possible that, after BBC Three had ceased linear broadcasting, UK viewers saw online video services, including BVOD platforms such as iPlayer, as a better substitute for traditional linear broadcast television than most of these studies suggest.

It is important to note that studies on substitution and displacement effects of the type mentioned above consider audiences' use of media types – such as television and the internet – in their entirety. This is important because, in line with Thurman and Fletcher's (2019) observations in a related study, the case in hand does not concern the general consumption of television and internet media but rather the consumption of the broadcast television and online platforms of a single media brand.

Also consistent with Thurman and Fletcher's (2019) observations is that such studies have limitations with respect to the case in hand because they 'describe the consequences of the introduction of new media alongside media that already existed' (5). This study is interested in the sudden withdrawal by an outlet of one of its existing media platforms. Can, then, what is known – about the effects on television viewing of online video services – help anticipate what might happen to the consumption of a television channel when its linear television platform is withdrawn altogether? If, as some of the research (e.g. Jang and Park, 2016; Budzinski et al., 2020) discussed above suggests, online video services can, in some circumstances and for some people, substitute for broadcast television, might a channel's online video service become a substitute for some – or many – of its former linear TV viewers when it ceases to broadcast? After all, if a television channel's streaming service can entice some viewers away from its linear television service while the two media platforms coexist, then, perhaps, when the linear television service is withdrawn, more viewers 'will be enticed online – the only place where that brand's content is now available' (Thurman and Fletcher, 2019). On the other hand, the fact that relatively few viewers appear to stop consuming linear television as a direct result of the introduction of BVODs suggests that their loyalty might be 'more to the medium – or at least the combination of medium and content – than to the content alone' (Thurman and Fletcher, 2019).

These two hypotheses, although apparently contradictory, might both hold true. The research that exists on other media outlets – a newspaper and a magazine – that have gone online-only shows how this can be the case. For *The Independent* and the *NME*, monthly readership did not fall, but the attention they attracted from their readers fell hugely. This suggests that the titles were able to maintain audience numbers through attracting new readers and/or converting former print-only readers into online visitors but that those readers either were, or became, less loyal and/or less attentive than their print readers had been.

The survey data (Communications Chambers, 2014) on the public's attitudes and intentions regarding the BBC's plan to close BBC Three as a linear TV channel indicated that, as with *The Independent* and the *NME*, the attention attracted by the channel could fall substantially after it ceased offline distribution. However, the survey also indicated that – unlike with *The Independent* and the *NME* – the size of the channel's audience could also fall substantially.

Given the lack of any prior research on the closure of a television channel's linear broadcast and the mixed signals given by the other, related research that has been discussed, it was decided to formulate open research questions rather than specific hypotheses. The first of these concern changes in the channel's audience size[1] and the intensity with which it is viewed:

RQ1: How did the size of BBC Three's weekly and monthly audience change after it closed its linear TV channel?

RQ2: How did the intensity with which BBC Three was viewed – expressed in 1) annual minutes of viewing and 2) weekly gross half hour claims – change after it closed its linear TV channel?

Change in content availability and consumption

Previous quantitative studies on media brands' moves online-only (Thurman and Fletcher, 2018, 2019) have focused on changes in the consumption of the outlets in their entirety and have not attempted to analyse the mix of content available – and consumed – before and after, or the extent to which any differences therein can be attributed to the change in distribution mechanism. The reason for this is that data about the particular stories consumed within these publications – particularly in print – was difficult or impossible to acquire.

By contrast, in the UK – as in many other markets – data on the consumption of individual television programmes is available, meaning that, for the case in hand, it was possible to analyse changes in content consumption. However, any changes are unlikely to be attributable solely to the change in distribution mechanism. Other variables, such as programme availability and audience demographics, will play a part too. Because it is out of the scope of this article to conduct a multivariate analysis of changes in the genres of BBC

Three content consumed, descriptive statistics will be employed to answer the following research question:

RQ3: How did the content made available by BBC Three, and the consumption of that content by its audience, change after the channel closed its broadcast platform?

Methodology

Determining changes in audience size

To answer RQ1, data was acquired from the IPA's Touchpoints Hub Survey via a specialist data bureau, Telmar. The survey, which uses a representative sample of 5,000–6,000 British adults, was first fielded in 2005, and then again in 2007/8, 2009/10, 2011, 2013 and 2015. Since 2016 it has been fielded every year. Data on changes in the size of BBC Three's weekly and monthly audience comes from questions in the online survey about which TV channels respondents have watched (in any way) over the 'past 7 days' and 'past 4 weeks'.

Determining changes in viewing intensity

To answer RQ2, two different metrics – gross half hour claims (GHCs) and annual viewing minutes – from two different data sources – Touchpoints and BARB – were used.

As part of the Touchpoints Hub Survey, respondents keep an e-diary detailing their activities – including live, catch-up and on-demand TV viewing – every half hour over a week. As a result, Touchpoints was able to provide an estimate of the total number of weekly half hour periods (GHCs) during which British adults watched BBC Three (and other popular TV channels). Because respondents can report multiple activities in any given half hour period, one GHC for BBC Three does not necessarily mean that one person watched the channel for a full 30 minutes but rather it was watched at some point during that half hour period.

BARB data was used to determine the total minutes of viewing of BBC Three via linear broadcast television in the year before it closed its linear TV channel, the total minutes of viewing of BBC Three via non-linear TV, PCs, smartphones and tablets for a 12-month period (November 2018–October 2019) after its linear TV was closed, and the minutes viewers spent watching BBC Three-commissioned/acquired programmes that were aired on the BBC's remaining linear TV channels in the 'after' period. This 'after' period was not the 12 months immediately after BBC Three closed its linear TV channel in February 2016 because, until August 2018, BARB only collected limited information about the video-on-demand consumption of BBC Three. BARB is the official source of television audience measurement for the UK and their data was acquired via a specialist data bureau, Digital-i, and Enders Analysis. BARB's methodology combines passively collected data from their representative panel of approximately 12,000 UK residents with device-based census data collected via tags embedded in broadcaster video-on-demand services, such as iPlayer. Further details about BARB's methodology are included in the Supplemental Material.

Digital-i queried the BARB database to find the total minutes of viewing of each programme broadcast on BBC Three via linear TV in the 12 months up to the closure of the channel's linear broadcast. However, determining the total minutes of viewing of BBC Three via non-linear TV, PCs, smartphones and tablets for the selected 12-month period after the closure necessitated a large-scale coding exercise. Specifically, although Digital-i were able to query the BARB database to provide a list of every BBC programme that had been watched via the iPlayer between November 2018 and October 2019 (inclusive), and for how many minutes, that list did not identify which programmes belonged to BBC Three and which to other BBC television channels. In total, tens of thousands of unique programme episodes were consumed on BBC iPlayer during November 2018–October 2019. In order to identify which belonged to BBC Three, for each programme title BBC iPlayer was searched to determine to which channel it belonged. In total, around 1,251 unique episodes (of around 270 unique programmes) were identified as belonging to BBC Three. With that information it was possible to estimate the total number of minutes that each episode belonging to BBC Three was watched for and how those minutes of viewing were split between non-linear TV, PCs, tablets and smartphones (see Supplemental material for more information). To determine the minutes viewers spent watching BBC Three-commissioned/acquired programmes that were aired on the BBC's remaining linear TV channels in the 'after' period, the BARB database was queried by Enders Analysis using AdvantEdge.

Determining changes in content availability and consumption

To answer RQ3, data from BARB and from the BBC was used. As described above, BARB data was used to generate lists of BBC Three programmes consumed before the channel closed its linear broadcast platform, and after; and to estimate the number of minutes each programme had been watched for. To each programme in those lists a genre classification was added, using data from the BBC.[2] With each programme classified in this way it was possible, through simple addition, to determine the minutes of viewing of programmes of each genre on BBC Three via linear television before it closed its broadcast TV channel, and via its BVOD service after.

In order to compare the availability of BBC Three programming of different genres on linear TV before the channel closed its broadcast platform, and via its BVOD service after, the metric of 'minutes of programming broadcast/available to stream' was used. The list of episodes consumed on iPlayer after BBC Three closed its broadcast platform included each episode's length. The list of programmes consumed on BBC Three's linear broadcasting service in the 12 months up to the closure of its broadcast platform did not include information on each programme's length, so this information was manually added. Working on the assumption that these lists represented all BBC Three episodes available in the before and after periods,[3] it was straightforward to calculate the minutes of programming of each genre available.

Results

RQ1: How did the size of BBC Three's weekly and monthly audience change after it closed its linear TV channel?

The size of BBC Three's weekly and monthly audience, in common with most of its competitor TV channels, was declining before it closed its broadcast platform. However, its decision to stop broadcasting resulted in sharp drops. Comparing 2015 – the year before the channel closed its broadcast platform – against 2017 – the year after[4] – shows that BBC Three's 16–34 audience (its target group) shrank 69% on a weekly basis and 60% on a monthly basis. The losses in weekly (70%) and monthly (63%) adult British viewers of all ages were similar (see Figures 1 and 2). These falls were about three and five times higher than the falls that took place over a comparative period – 2013 to 2015 – when BBC Three was still broadcasting. After 2017, the channel's monthly audience stabilised – the number of 16–34 year old viewers fell slightly (by an average of 2.9% year-on-year), while the adult audience of all ages rose slightly (by an average of 1.2% year-on-year). Changes in weekly audience numbers followed a similar pattern between 2017 and 2018, but worsened between 2018 and 2019.

FIGURE 1: Number of weekly British viewers of BBC Three in two years before and the three years after it closed its linear TV channel. Source: IPA Touchpoints Hub Survey.

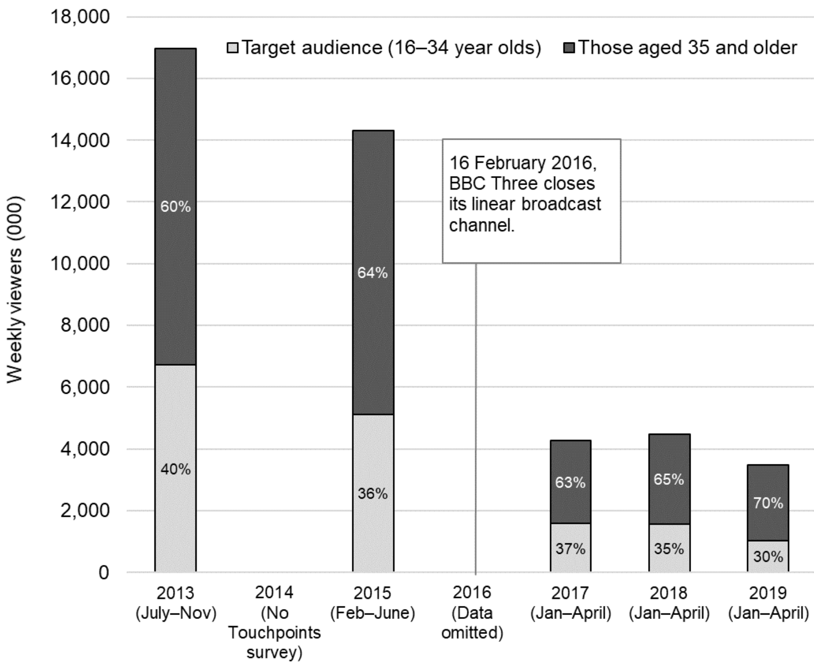
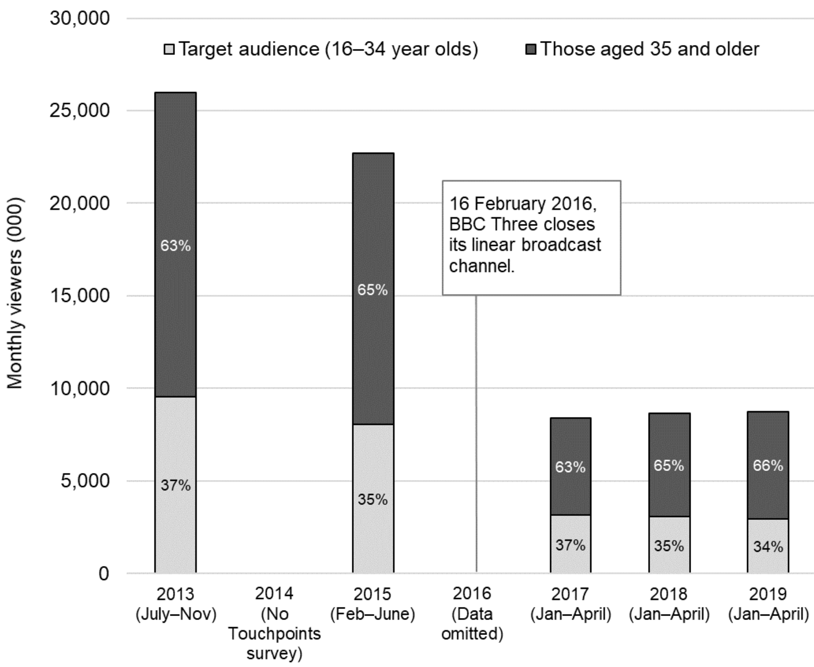


FIGURE 2: Number of monthly British viewers of BBC Three in two years before and the three years after it closed its linear TV channel. Source: IPA Touchpoints Hub Survey.

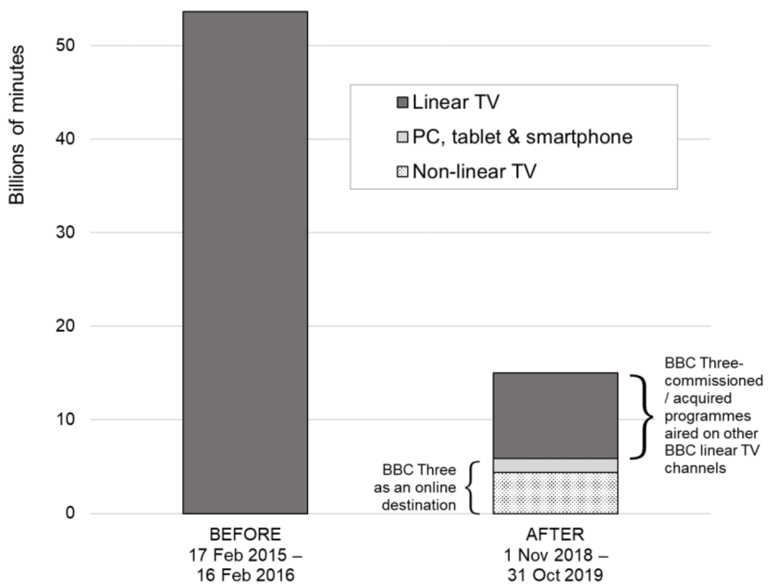


RQ2: How did the intensity with which BBC Three was viewed – expressed in 1) annual minutes of viewing and 2) weekly gross half hour claims – change after it closed its linear TV channel?

Annual minutes of viewing

The BARB data shows that the annual minutes of viewing of BBC Three via linear broadcast television in the year before it closed its broadcast platform was 53.59 billion. The minutes of viewing of BBC Three in a 12-month period (November 2018–October 2019) after was 5.8 billion, 89% less (see Figure 3). Even factoring in the 9.14 billion minutes viewers spent watching BBC Three-commissioned/acquired programmes on the BBC's remaining linear TV channels, the decline in viewing time was at least 72%. Looking in more detail at how BBC Three was watched online after it closed its linear TV channel reveals that the vast majority of viewing minutes (79% of the total) were via television sets, while only 9% were via PCs, 7% via smartphones and 6% via tablet computers. For clarity, the online viewing of BBC Three via television sets is mainly attributable to viewers watching the channel on iPlayer via an internet-connected smart TV or via internet-connected devices – such as Google Chromecast or Apple TV – that are plugged into the television set.

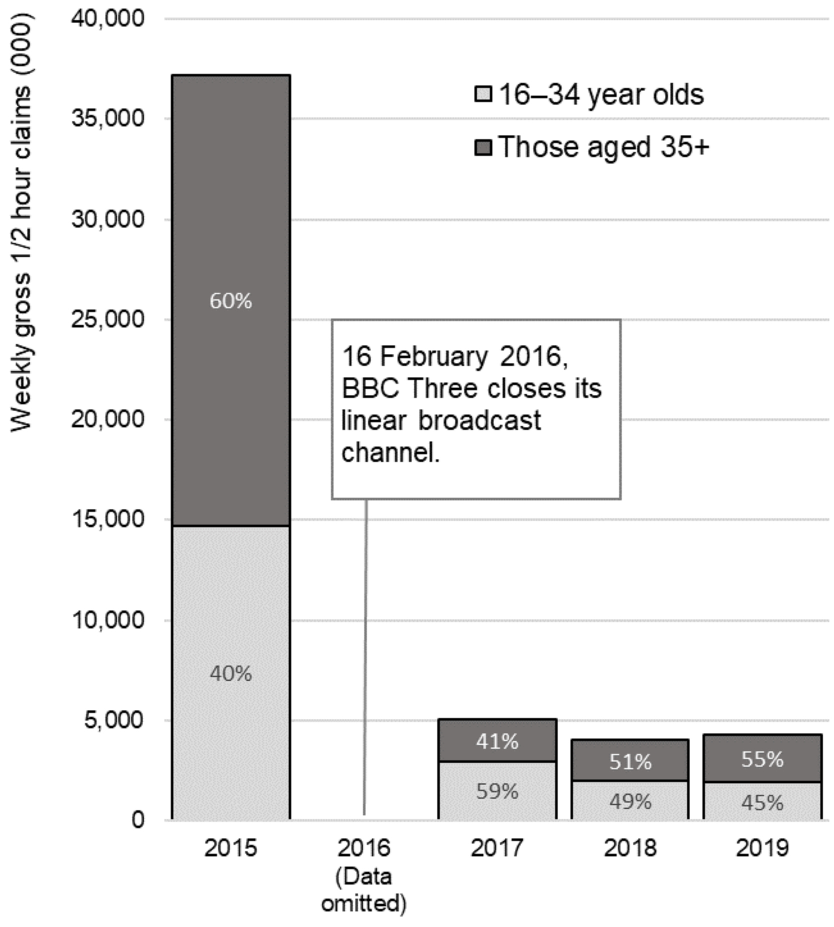
FIGURE 3: Minutes of viewing of BBC Three by UK residents (aged 4+) via linear television in the 12 months before it closed its linear TV channel and via non-linear TV, PCs, smartphones and tablets in a 12-month period (November 2018–October 2019) after. Also shown for the 'after' period is minutes of viewing of BBC Three-commissioned/acquired programmes that aired on other BBC linear TV channels. Source: BARB.



Gross half hour claims

The Touchpoints e-diary data shows that, in 2015, the year before BBC Three closed its broadcast platform, the channel attracted 37,208,000 weekly gross half hour claims (GHCs) from British adults aged over 15. In 2017, the year after, that figure had fallen to 5,062,000, a drop of 86%. Weekly GHCs were even lower (4,033,000) in 2018 but stabilised in 2019 (see Figure 4). Among the channel's target audience of 16–34 year olds, the fall in GHCs between 2015 and 2017 was slightly less (80%) than among all adults. However, by 2019 that difference had all but disappeared, with BBC Three receiving 87% fewer GHCs from its target audience than it did before it closed its linear TV channel, only one percentage point less than the drop for all adults.

FIGURE 4: Weekly gross half hour claims (GHCs) for BBC Three among its target audience of 16–34 year olds and those aged 35+ in the year before and the three years after it closed its linear TV channel. One GHC is registered when one viewer claims to have watched the channel for at least part of a designated half hour period. Source: IPA Touchpoints Hub Survey (e-diary).



RQ3: How did the content made available by BBC Three, and the consumption of that content by its audience, change after the channel closed its broadcast platform?

Given that BBC Three's content budget was reduced – by around 63% – as part of its reinvention online, it is no surprise that the number of minutes of programming available after the switch also fell; by around 80%.

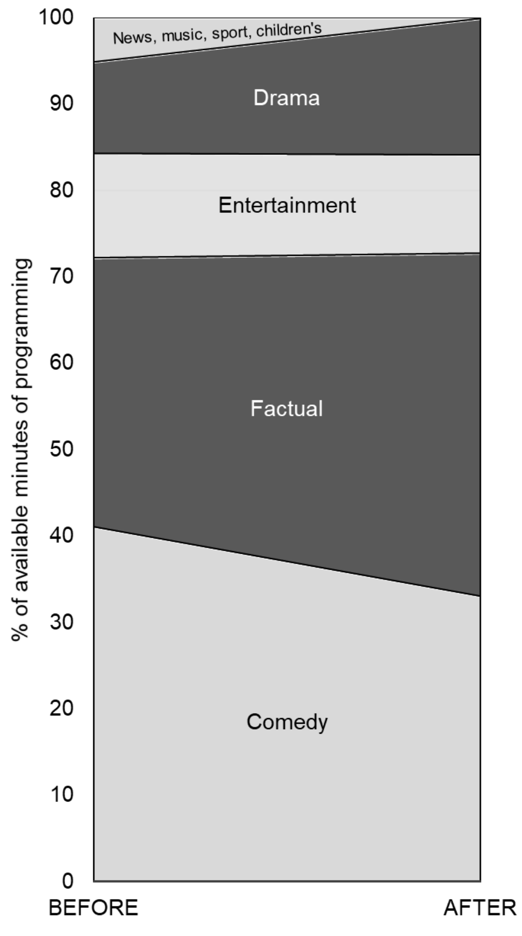
The drama, entertainment, factual and comedy genres represent the vast majority of programming available – and consumed – before and after BBC Three's reinvention online. Although BBC Three decided that one of the two 'editorial pillars' of its reinvention online incarnation should be 'Make Me Laugh', a term that encompassed comedy and 'personality-led entertainment' (BBC, 2015), the proportion of the channel's output (in minutes) devoted to comedy actually fell post-switch, from 41% to 33%. This is likely a consequence of the decision to strip the channel of its 'US animation imports' (Woods, 2017: 142), which included *Family Guy* and *American Dad!*, American animated sitcoms that BBC Three had broadcast, on average, more than four times a day. Although comedy made up a lower proportion of the minutes of programming available on BBC Three after its linear TV channel closed, the genre accounted for a higher proportion of viewing minutes after the switch (see Figures 5 and 6).

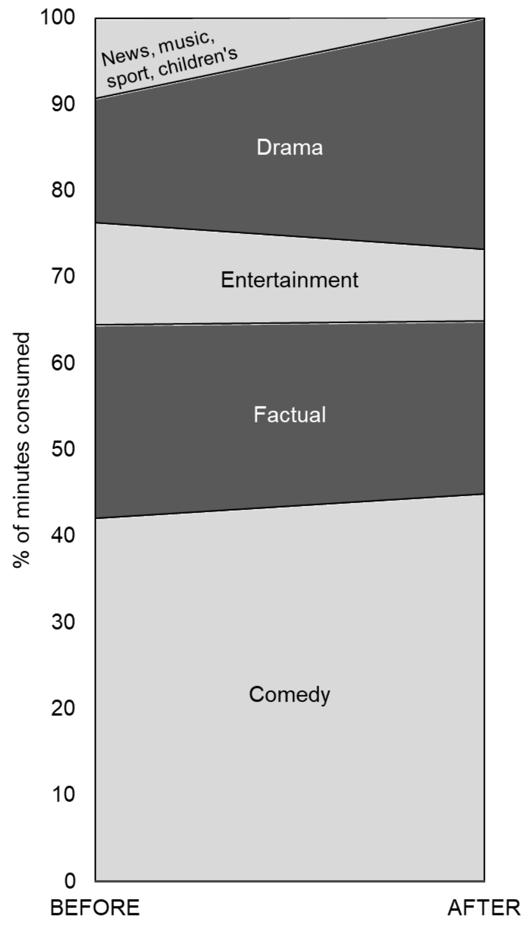
The other editorial pillar of the newly online-focussed BBC Three was 'Make Me Think', intended to 'cover drama, flagship factual, authored documentaries, news and current affairs' (Ramsey, 2018: 159). The proportions of the channel's output (in minutes) devoted to drama and factual did, indeed, both increase. However, although factual makes up a higher proportion of the minutes of programming available on BBC Three since it closed its broadcast platform, the genre accounts for a lower proportion of viewing minutes after the switch. This is not the case for drama, where there were increases in both the proportional availability of the genre, and in its proportional consumption (see Figures 5 and 6).

The minutes of news, sport, music and children's programming transmitted by BBC Three on linear television in the year before that platform closed were negligible. These genres have, for all practical purposes, become unavailable since BBC Three was reinvented online. It is no surprise then that, given the unavailability of news, sport and children's programmes, those genres are no longer consumed, and, although there is still some consumption of music programming, it represents just 0.01% of total viewing minutes (see Figures 5 and 6).

FIGURE 5: Changes in the availability of BBC Three programmes of different genres before and after the channel closed its broadcast platform. The data represents the proportions of the channel's total minutes of 1) linear broadcast output in the 12 months before its linear TV channel was closed and 2) programming available on iPlayer during a 12-month non-consecutive period (November 2018–October 2019) after the closure.

FIGURE 6: Changes in the consumption of BBC Three programmes of different genres before and after the channel closed its broadcast platform. The data represents the proportions of the total viewing minutes the channel received 1) on linear television in the 12 months before its linear TV channel was closed and 2) via non-linear TV, PCs, tablets and smartphones in a 12-month non-consecutive period (November 2018–October 2019) after the closure.





Sources: BARB and the BBC.

Discussion

Audience size

This study has shown that the size of BBC Three's audience fell by between 60 and 70% in the year after it closed its broadcast platform. Given that the channel was experiencing falls in audience before the switch, it is important to ask how much of the post-broadcast fall was attributable to its reinvention online. Figures 1 and 2 make it clear that the rates of decline were higher (by between about three and five times) in the year after the closure of its linear TV channel than they were in the years before, but it is possible to be sure that this is not in line with what analysts have called a wider 'relentless decline' in TV viewing that 'began in 2011' (Aquilina and Thomson, 2019)?

To check, Touchpoints data for six of BBC Three's competitor TV channels, who continued to broadcast was analysed. The data shows that the average audience of these other channels did decline between 2015 and 2017, but to a lesser degree – by between 7 and 15% (see Figures 7 and 8). It is safe to conclude, therefore, that BBC Three's online reinvention was responsible for at least three-quarters of its fall in audience size.

FIGURE 7: Average number of British monthly viewers of six UK TV channels (BBC1, BBC2, ITV, ITV2, Channel 4 and E4) that have continued linear broadcasting, 2013–2019. Source: IPA Touchpoints Hub Survey.

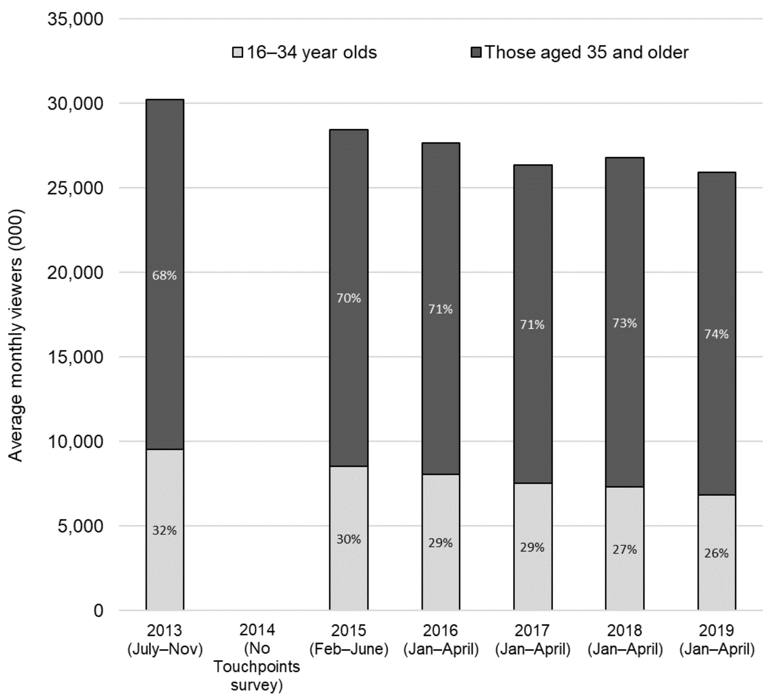
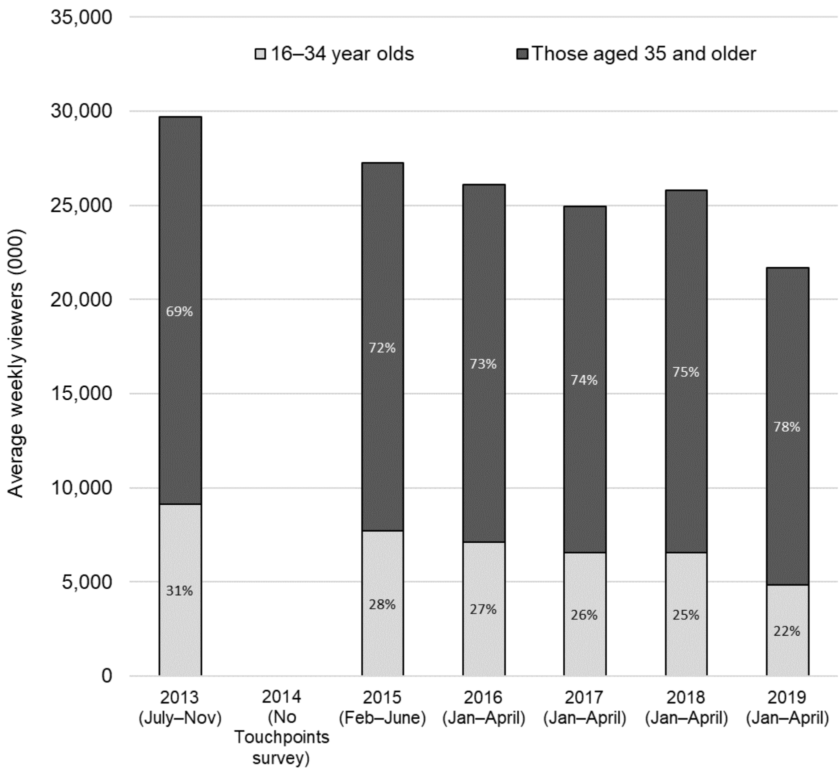


FIGURE 8: Average number of British weekly viewers of six UK TV channels (BBC1, BBC2, ITV, ITV2, Channel 4 and E4) that have continued linear broadcasting, 2013–2019. Source: IPA Touchpoints Hub Survey.



The large falls in audience size suffered by BBC Three after the closure of its linear TV channel contrast with the changes in net readership that previous studies (Thurman and Fletcher, 2018, 2019) have found for a newspaper – *The Independent* – and a magazine – *the NME* – that went online-only. It is necessary, however, to proceed carefully when comparing the changes in net readership that took place at these print publications with the change in net viewers found at BBC Three because of the differences in the frequency with which some of their content platforms are distributed. While they all have a – more-or-less – continuously updated online presence, the *NME* and *The Independent*, before they moved online-only, had, respectively, weekly and daily print publications, and BBC Three was a television channel that broadcast daily. As Thurman and Fletcher (2019) have shown, the big differences that can exist in the frequency with which consumers visit media brands' on- and offline platforms can interact with the periodicity of their publication intervals and the time period over which readership is calculated to make it impossible to compare changes in readership 1) between media outlets with platforms that issue content with different frequencies, and 2) using different calculation periods.

Therefore, no comparison of changes in audience size should be made between the *NME* and BBC Three. However, a comparison between changes in audience size at *The Independent* and BBC Three is legitimate if it is made using data calculated over identical time periods. The only data available on post-print changes in readership at *The Independent* that includes mobile readers is calculated on a monthly basis. Given the importance of mobile devices to newspapers' readership, it is that data that should use in any comparison with BBC Three. Making this comparison shows that *The Independent* increased its net monthly readership – by 7.7% – after it went online-only in 2016 (Thurman and Fletcher, 2018), while, as this study has shown, BBC Three's monthly audience shrank by 63% when it closed its linear TV channel the same year. Why might BBC Three have suffered such a large fall in its monthly audience after it closed its offline platform when *The Independent* did not?

The primary reason is likely to do with the relative proportions of the outlets' audiences that consumed them exclusively offline before the outlets closed their offline platforms. At the point it ditched print, *The Independent*'s monthly online audience dwarfed its monthly print-only audience: in the 12 months up to its move online-only, *The Independent*'s monthly print-only readership was 1,361,000, just 7.6% of its net monthly readership (Thurman and Fletcher, 2018). By contrast, the BBC reported that, in 2015, only 20% of BBC Three's weekly viewers also accessed BBC iPlayer in that week (Communications Chambers, 2015: 26).

Because large proportions of *The Independent*'s net monthly readership were already reached by the brand's online editions before it went online-only, the impact of losing print-only readers who did not transition to the newspaper's online editions was negligible. However, because at the point at which BBC Three closed its offline platform, the vast majority of its audience only watched it via linear television, the impact of losing viewers who only watched the channel on linear television and did not follow the channel online was substantial.

A second reason for the difference observed between BBC Three and *The Independent* in how the size of their audiences changed after they closed their offline platforms is likely due to how the size of BBC Three's audience (see Figures 1 and 2) was already on a downward trajectory when it shuttered its broadcast platform. By contrast, *The Independent*'s net monthly print and PC readership actually increased between 2013 and 2015, by 7% (NRS, 2014, 2015).

Viewing intensity

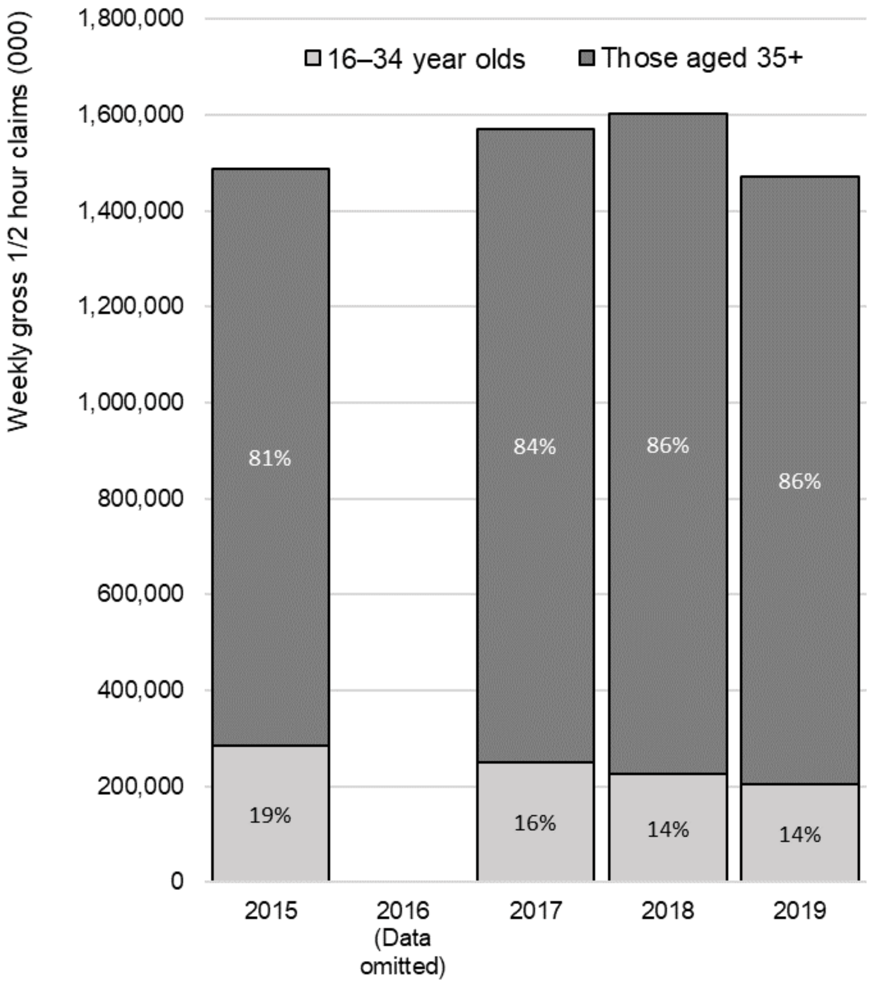
This study analysed changes in the intensity with which BBC Three was watched after it closed its broadcast platform, using two metrics collected using different methodologies. The first metric, gross half hour claims (GHCs), is self-report e-diary data. The second metric, minutes of viewing, is passively collected tracking data. Both metrics show that the attention that BBC Three attracted from its audience was hugely reduced after its linear TV channel was closed. It is well understood that different ways of measuring media audiences can give different results, in part because people can both over- (see, e.g., Prior, 2009) and underestimate (see, e.g., Pellegrini et al., 2015) their media consumption. It is reassuring, then, to see two different data sources telling similar stories about the change in intensity with which BBC Three was watched after it reinvented itself online.

Given the size of the fall in GHCs for BBC Three, it seems highly likely that BBC Three's online reinvention is the primary cause. Looking at Touchpoints data for six of BBC Three's competitor TV channels that continued linear broadcasting adds weight to this hypothesis, showing that the total GHCs for all these other channels actually increased between 2015 and 2017, by 5.6% (see Figure 9).

The similarity of the falls in time spent with BBC Three (−89% if viewing of BBC Three-commissioned/acquired content on other BBC TV channels is excluded, around −72% if it is included), *The Independent* (−81%) and the *NME* (−72%) suggests that the negative effects on time spent with media brands caused by the closure of their offline platforms may be similar in degree for both TV stations and print publications.

This study's results show how over three-quarters of the minutes of online viewing of BBC Three after the channel closed its broadcast platform was via television sets, and less than a quarter was via PCs, smartphones and tablets. This appears to confirm other research (e.g. Simons, 2009) that suggests the television set remains the preferred device for consuming televisual content, even for a channel that has reinvented itself online. The reasons for this are likely to do with the social context in which televisual content may be viewed and audiences' habitual viewing routines (see, e.g., Lee and Lee, 1995).

FIGURE 9: Total weekly gross half hour claims (GHC) for six UK TV channels (BBC1, BBC2, ITV, ITV2, Channel 4 and E4) that have continued linear broadcasting among 16–34 year olds and those aged 35+, 2015–2019. One GHC is registered when one viewer claims to have watched a channel for at least part of a designated half hour period. Source: IPA Touchpoints Hub Survey (e-diary).



Content availability and consumption

The results show that the mix of BBC Three programming consumed on linear television before the channel reinvented itself online differs from the mix consumed after (see Figure 6). This may be due, in part, to how availability of programmes of different genres has changed (see Figure 5). For example, news, sports and children's programming is no longer available and, therefore, no longer consumed. However, the higher proportional consumption of comedy cannot be explained solely with reference to this genre's proportional availability, which declined after BBC Three closed its linear TV channel.

Similarly, the lower proportional consumption of entertainment and factual programming cannot be explained solely with reference to these genres' proportional availability, which increased.

As mentioned earlier, multiple factors may have contributed to these changes, including scheduling effects, and changes to the demographics of BBC Three's audience. The article's main variable of interest – the change in BBC Three's distribution mechanism – may have had an effect too. Although it was out of the scope of this study to analyse whether this was the case, theoretically it could have been. For example, based on a survey of 257 American students, Youn (1994) claimed that, in the context of television, an increase in programme choice enables viewers to choose content that better matches their preferences. Via its linear broadcast, BBC Three was relatively 'low choice'. Viewers could watch the particular programme that was being transmitted at the time they tuned in—or a slightly wider selection via catch-up viewing. By contrast, its on-demand streaming service is relatively 'high choice', offering hundreds of individual episodes simultaneously. It may be, then, that a reason for the higher proportional consumption of comedy on BBC Three after the channel closed its broadcast platform (despite the genre being less available) is because viewers with a preference for the genre were able to choose it at will, freed from the limitations of the television schedule.

Data limitations

The Touchpoints survey data used to answer RQ1 relies on respondents' imperfect memories (see, e.g., Prior, 2009). Media diaries can suffer from compliance problems, although e-diaries with built-in reminders – the source of this study's data on GHCs[5] – can help ameliorate this issue (see, e.g., Lev-On and Lowenstein-Barkai, 2019). Any methodological biases in the Touchpoints data due to recall or compliance issues should be consistent over time, meaning it is possible to be confident about the validity of the trends observed.

Data from BARB was used to estimate the change in minutes BBC Three was watched before and after its broadcast channel was closed, and how that viewing was distributed across platforms and programmes. There are a number of limitations in respect of BARB's data, relating to whether the consumption of BBC Three programmes at particular times and via particular devices and platforms is recorded. A full description of these limitations is included in the Supplemental Material.

Conclusion

Many – including the BBC itself – expected BBC Three's online reinvention to have negative consequences for how many viewers the channel attracted, and for how long. As this study has shown, this was, indeed, the case. The number of monthly viewers fell even further than a BBC-commissioned survey of viewers (Communications Chambers, 2014: 4) suggested it might, with the channel shedding almost two-thirds of its monthly viewers – and a little more than two-thirds of its weekly ones (see Figures 1 and 2). These losses are undeniably a result of its online reinvention, being greater than the more modest falls BBC Three had been experiencing beforehand and the falls experienced by its competitors who continued to broadcast. Also undeniable is the effect of BBC Three's online reinvention on the intensity with which BBC Three is watched, with GHCs down by 86% and annual viewing minutes after the switch 89% less than the channel achieved on linear television before (around 72% less if viewing of BBC Three-commissioned/acquired content on other BBC TV channels is included). More surprising, perhaps, is that the size of BBC Three's 16–34 year old target audience has reduced to a greater extent than the size of its 35+ audience, raising doubts about whether, in the context of BBC Three, young audiences were, as the BBC's director general suggested, 'most ready to move to an online world' (Plunkett and Sweney, 2014). It is perhaps no surprise then that, by May 2020, the BBC's official position was that "there is potentially a strong case for restoring BBC Three as a linear channel" (BBC 2020), with a final decision due to be made in "the autumn" (BBC News 2020).

Given that the present study is the first to analyse the audience effects on a television channel of ceasing linear broadcasting, there is a clear need for further research in order to establish whether the falls in audience size and viewing intensity experienced by BBC Three are typical. The Danish Broadcasting Corporation's channels DR3 and DR Ultra, which went online-only in January 2020, are obvious case study candidates.

Studies on the substitutability of broadcaster video-on-demand services and television have showed that – at least up to 2012 – the former did not substitute for the latter (Cha, 2013; Taneja et al., 2012) or only did so partially (Jang and Park, 2016). This study has, for the first time, examined such substitutability in the context of the broadcast television and online platforms of a single media brand, showing that, even by 2018/9, the online platform – albeit offering fewer and different programmes – was, for most viewers, not a suitable substitute.

More widely, this study develops the nascent 'theory of media platform cessation' (Thurman and Fletcher, 2019) by making two original contributions. Firstly, by analysing the audience effects on a television station as opposed to a periodical, and, secondly, by analysing how the availability and consumption of an outlet's content – rather than the consumption of an outlet in its entirety – changed.

The results suggest that the size of a media outlet's exclusively offline audience may influence changes in the size of a media outlet's audience after it closes its offline platform. By comparing BBC Three and *The Independent* using these variables, this study has provided evidence that lends credibility to this reasonable, but previously untested, hypothesis.

This study also suggests that the sudden and substantial falls in time spent with media brands caused by the closure of their offline platforms may be similar in degree for periodicals and TV stations. In light of the important democratic functions newspapers and public service media (PSM) – like BBC Three, DR3 and DR Ultra – perform, it will be important to monitor how these functions are affected as more periodicals – and perhaps more PSMs – close their offline platforms.

BBC Three's reinvention online was intended to make its audience 'laugh' and 'think' and, as has been shown, the proportional availability of some programme genres did change in line with this ethos. Of wider interest, perhaps, is the possibility, suggested by our results, that the change in distribution mechanism altered what viewers chose to watch. To establish whether this was actually the case, however, further research using multivariate analysis would be required that accounted for other influences such as linear scheduling; promotion and availability of episodes on the iPlayer; audience demographics; and the levels of marketing, advertising and critical and popular acclaim programmes receive.

Notes

1. In this article, the size of BBC Three's audience is reported in absolute terms rather than as a percentage of the population reached. This was done in order that changes in BBC Three's audience size could be compared against changes in the (absolute) number of readers of *The Independent* after it went online-only. Absolute audience figures can be effected by changes in the population. However, in the case of BBC Three, changes in the channel's reach and absolute viewer numbers are virtually identical, meaning that for the purposes of calculating trends the figures are interchangeable.
2. https://www.bbc.co.uk/programmes/genres
3. To be included on these lists a BBC Three programme need only have been consumed, in total, for a few minutes. It is reasonable to assume that every BBC Three episode broadcast or made available on iPlayer was watched for at least a few minutes.
4. In 2016, the Touchpoints Hub Survey was fielded between January and April, either side of BBC Three's switch to online-only. For this reason the 2016 Touchpoints data was excluded from the analysis.
5. The Touchpoints e-diary can issue up to four reminders per day to respondents if required (Daniel Flynn, 6 March 2020, personal communication).

References

Andersen MMT (2018) DR3 på flow og streaming – en todelt kanalanalyse. *MedieKultur* 34(65): 138–157.

Aquilina J and Thomson T (2019) TV set viewing trends: linear audiences tumble in 2018. Enders Analysis, 7 February.

BBC (2015) Public value assessment of the reinvention of BBC Three online and related proposals: Submission to the BBC Trust. Available at: http://downloads.bbc.co.uk/bbctrust/assets/files/pdf/review_report_research/service_changes/bbc_three_application.pdf

BBC (2020) Bringing us closer: BBC Annual Plan 2020/21. Available at: http://downloads.bbc.co.uk/aboutthebbc/reports/annualplan/annual-plan-2020-21.pdf

BBC News (2020) BBC Three could return as an on-air channel. *BBC News Online*, 19 May. Available at: https://www.bbc.com/news/entertainment-arts-52719883

BBC Trust (2013) BBC Three service licence. Available at: http://downloads.bbc.co.uk/bbctrust/assets/files/pdf/regulatory_framework/service_licences/tv/2013/bbc_three_sep13.pdf

BBC Trust (2014) Service review of BBC Television: BBC One, BBC Two, BBC Three & BBC Four. Available at: http://downloads.bbc.co.uk/bbctrust/assets/files/pdf/regulatory_framework/service_licences/service_reviews/television_services/television_services.pdf

Blake Knox K (2020) The bigger picture: How do you solve a problem like RTÉ? *Irish Independent*, 14 March, 6–7.

Boier P (2020) Derfor har du færre DR-kanaler fra i dag. Available at: https://www.dr.dk/nyheder/indland/derfor-har-du-faerre-dr-kanaler-fra-i-dag (accessed18 March 2020).

Budzinski O, Gänßle S and Lindstädt-Dreusicke N (2020) The battle of YouTube, TV and Netflix: An empirical analysis of competition in audio-visual media markets, Ilmenau Economics Discussion Papers, No. 137, Technische Universität, Institut für Volkswirtschaftslehre, Ilmenau.

Cha J (2013) Do online video platforms cannibalize television? How viewers are moving from old screens to new ones. *Journal of Advertising Research* 53(1): 71–82.

Cha J and Chan-Olmsted SM (2012) Substitutability between online video platforms and television. *Journalism & Mass Communication Quarterly* 89(2): 261–278.

Communications Chambers (2014) BBC Three PVT: Summary of results from the quantitative research regarding proposed service changes. October. Available at:

http://downloads.bbc.co.uk/bbctrust/assets/files/pdf/review_report_research/service_changes/quantitative_research.pdf (accessed 20 March 2020).

Communications Chambers (2015) Forecast consumption and preliminary market impact assessment of revised BBC services. January. Available at: http://downloads.bbc.co.uk/bbctrust/assets/files/pdf/review_report_research/service_changes/market_impact_assessment.pdf

Doyle G (2016) Resistance of channels: Television distribution in the multiplatform era. *Telematics and Informatics* 33(2): 693–702.

Ellis-Petersen H (2016) Credits roll on-air for the final time as BBC3 becomes online only. *The Guardian*, 16 February. Available at: https://www.theguardian.com/media/2016/feb/16/credits-roll-final-time-bbc3-television-online-only

Franks N (2018) DR to close more channels. Available at: https://www.c21media.net/dr-to-close-more-channels/ (accessed 18 March 2020).

Jang S and Park M (2016) Do new media substitute for old media?: A panel analysis of daily media use. *Journal of Media Economics* 29(2): 73–91. DOI: 10.1080/08997764.2016.1170021.

Kavanagh D (2014) Blazing a trail for new BBC Three. In: BBC blog, 10 December. Available at: https://www.bbc.co.uk/blogs/aboutthebbc/entries/fa632091-9a8c-304e-a479-e054dc368c47

Lee B and Lee RS (1995) How and why people watch TV: Implications for the future of interactive television. *Journal of Advertising Research* 35(6).

Lev-On A and Lowenstein-Barkai H (2019) Viewing diaries in an age of new media: An exploratory analysis of mobile phone app diaries versus paper diaries. *Methodological Innovations*. Available at: https://doi.org/10.1177/2059799119844442

NRS (2014) NRS Padd for Jan–December 2013. Available at: http://www.nrs.co.uk/downloads/padd-files/xls/padd-jan13_dec13-newspapers.xls (accessed 19 March 2020).

NRS (2015) NRS Padd for July 2014–June 2015. Available at: http://www.nrs.co.uk/downloads/padd-files/xls/nrs_padd_jul14_jun15_newsbrands.xls (accessed 19 March 2020).

Pellegrini P, Bradley D, Swift K and Boals T (2015) Cross platform media measurement: Mobile and desktop online measurement comparisons. Paper presented at the PDRF 2015 Symposium, London, October. Available at: https://www.pdrf.net/wp-content/uploads/2015/10/10_Syn43Pellegrini.pdf (accessed 14 May 2020).

Plunkett J (2014) BBC3 closure triggers protests from channel's star names. *The Guardian*, 5 March. Available at: https://www.theguardian.com/media/2014/mar/05/bbc3-closure-triggers-protests-star-names

Plunkett J and Sweney M (2014) BBC3 closure confirmed for autumn 2015. *The Guardian*, 6 March. Available at: https://www.theguardian.com/media/2014/mar/06/bbc3-closure-bbc1-drama

Prior M (2009) The immensely inflated news audience: Assessing bias in self-reported news exposure. *Public Opinion Quarterly* 73(1): 130–143.

Ramsey P (2018) 'It could redefine public service broadcasting in the digital age': Assessing the rationale for moving BBC Three online. *Convergence* 24(2): 152–167. DOI: 10.1177/1354856516659001.

Simons N (2009) 'Me TV': Towards changing TV viewing practices? In: *EuroITV'09: Proceedings of the 7th European Conference on Interactive TV and Video*, Leuven, Belgium, 3–5 June, pp. 219–222.

Taneja H, Webster JG, Malthouse EC and Ksiazek TB (2012) Media consumption across platforms: Identifying user-defined repertoires. *New Media & Society* 14(6): 951–968. DOI: 10.1177/1461444811436146.

Thurman N and Fletcher R (2018) Are newspapers heading toward post-print obscurity? A case study of The Independent's transition to online-only. *Digital Journalism* 6(8): 1003–1017.

Thurman N and Fletcher R (2019) Effects of a magazine's move to online-only: Post-print audience attention and readership retention revisited. *Journalism Practice*. Available at: doi.org/10.1080/17512786.2019.1685903

Thurman N and Myllylahti M (2009) Taking the paper out of news: A case study of Taloussanomat, Europe's first online-only newspaper. *Journalism Studies* 10(5): 691–708.

Woods F (2016) *British Youth Television*. London: Palgrave Macmillan.

Woods F (2017) Streaming British youth television: Online BBC Three as a transitional moment. *Cinema Journal* 57(1): 140–146.

Youn S-M (1994) Profile: Program type preference and program choice in a multichannel situation. *Journal of Broadcasting & Electronic Media* 38(4): 465–475

Supplemental Material

BARB's methodology

BARB's data is produced using a methodology that combines device-based census data with data from their panel of viewers. BARB's panel is made up of around 5,300 homes that are representative of UK household type, demographics, TV platform(s) used and geography. Every TV set in each home is fitted with a meter and each resident (approximately 12,000) in these homes has to register when they are in a room when a television is on. What is being watched is determined via audio matching – comparing the televisions' audio output with a reference library of television programme content provided by the broadcasters. Software meters are also installed on panellists' PCs and tablets so that viewing of BVOD services on these devices can be monitored. BARB's panel of 12,000 is too small to accurately measure the consumption of the large number of programmes available via broadcasters' video-on-demand services. In order to get around this limitation, BARB also collects device-based census data that is generated by tags embedded in broadcasters' video-on-demand services. These tags generate online TV viewing data detailing what has been watched, for how long and whether that consumption was via a PC, tablet or smartphone (BARB, n.d.). However, because this tagging-based measurement records devices not people, it cannot tell BARB 'the number of people watching or who they are' (BARB, n.d.). Therefore, BARB combines this device-based data with their panel data, a process that has enabled them to, for example, provide multiple-screen (TVs, tablets, PCs and smartphones) programme audience figures since August 2018.

Previous to August 2018, BARB only collected information about the non-linear consumption of BBC Three via iPlayer on Sky boxes.[2] Sky households are not representative of all UK households, and the BBC iPlayer can, of course, be watched via PCs (laptops and desktops), tablet computers, smartphones and other devices. It is for this reason that this study's 'after' period was chosen to be November 2018–October 2019.

[2] Sky boxes are the devices Sky subscribers use to access content. According to BARB (2020), in the second quarter of 2019, 8.64 million UK households had Sky compared with 17.89 million who had terrestrial TV.

Limitations of the BARB data

The first limitation is that BARB only started to fully report the consumption of BBC Three programmes via non-linear TV, PCs, smartphones and tablets after the channel closed its linear broadcast platform. Therefore, the consumption of the channel in these ways before it reinvented itself online is largely not reflected in our data. This means that our results may underestimate the annual minutes of viewing of BBC Three before it closed its linear broadcast platform. However, any such underestimation is almost certainly less than 5%, given this study's estimation of the minutes of consumption of BBC Three via non-linear TV, PCs, smartphones and tablets after the channel reinvented itself online and the fact that such consumption has been growing over time. This limitation also means that our comparison of content availability and consumption before and after BBC Three closed its linear broadcast platform is more accurately described as a comparison of content availability and consumption via BBC Three's linear television channel before it closed its linear broadcast platform against content availability and consumption via iPlayer after.

The second limitation relates to the fact that the BARB data does not account for most of the consumption of BBC Three via social media channels. As BBC Three was planning to reinvent itself online, the channel's then digital controller wrote that they would be 'ramping up activity on Facebook, Twitter, Tumblr and Instagram' (Kavanagh, 2015a) and that the channel would be able to 'make content for the places [our audiences] are, on Snapchat and What's App, on Tumblr and Facebook, on Twitter and YouTube' (Kavanagh, 2015b). An informal content analysis of the channel's social media feeds indicates that the video content BBC Three uploads to Facebook, Twitter, Instagram, Snapchat and Tumblr consists of short promotional trailers rather than full programmes. BBC Three's YouTube channel does contain some full programme episodes, but mostly promotional clips. The lack of data on the consumption of BBC Three via social media channels is not considered to be a major limitation, firstly due to the promotional nature of almost all the content published on these channels, and, secondly, because BBC Three was on social media platforms – like Twitter, YouTube, Facebook and Snapchat – before it ended its linear broadcast platform.

A third limitation of the BARB data relates to the fact that, since it closed its linear broadcast platform, all of BBC Three's original long-form content has also been transmitted on broadcast television slots on BBC One, BBC Two or BBC Four. This happened on the insistence of the BBC Trust in order 'to ensure that those without a reliable internet connection … or who preferred to watch programmes on television had continued access to BBC Three output' (BBC Trust, 2015: 46). Due to BARB's methodology, the consumption of BBC Three episodes online *via a TV set* (e.g. on a smart TV) can be attributed to (linear) BBC One, BBC Two or BBC Four. This happens if BBC Three episodes are consumed in this way during the 28 days following their transmission on linear BBC One, BBC Two, or BBC Four. Although this study accounts for the viewing of BBC Three-commissioned/acquired programming on linear BBC One, BBC Two, or BBC Four, this limitation means that some of that linear viewing was actually non-linear viewing of BBC Three episodes online via a TV set (e.g. on a smart TV). This limitation of BARB's methodology has affected our data in another way. It means that, before BBC Three closed its linear broadcast platform, the consumption of any BBC Three episodes online *via a TV set* (e.g. on a smart TV) within 28 days of their broadcast on BBC Three's linear TV channel was attributed to the linear channel. Therefore, some of the viewing minutes our results attribute to BBC Three's linear broadcast before it closed its linear broadcast platform were actually minutes of viewing of the channel via iPlayer on a television set.

A fourth limitation is that the BARB data acquired from Digital-i for the 'after' period does not account for the consumption of BBC Three programming via non-TV devices via other apps, such as Sky Go. Sky Go is a mobile and PC app that allows Sky subscribers to stream content (including from BBC iPlayer) or download it for viewing later. The omission of viewing minutes to BBC Three via Sky Go is not considered likely to be a significant limitation: BARB figures show viewing to Sky Go on-demand across all channels (within a Sky customer's subscription) to be less than a fifth of viewing to iPlayer on-demand, so BBC Three programming would likely account for an insignificant proportion of consumption via Sky Go.

A fifth limitation is that the BARB data acquired from Digital-i for the 'after' period lacked non-linear TV data for approximately 229 unique episodes and lacked (or had insufficient) computer/tablet/smartphone data for about another 47 unique episodes. The main reason for the lack of non-linear TV data was due to the absence of audio matching files for some episodes. Another reason is that the size of the BARB panel (approximately 12,000 individuals) means that it is too small to pick up very small amounts of non-linear viewing. To estimate the missing amount of unmeasured viewing for these episodes, the median proportion of viewing via each device was calculated across the 772 unique episodes for which the data was deemed to be robust enough. This produced a median figure of 72.7% of viewing minutes via the TV set and 26.4% via computers/tablets/smartphones. These figures were used to estimate the missing viewing minutes.

A summary of how the device used to consume BBC Three programmes, when those programmes were watched and whether those programmes were also shown on another BBC channel affects whether that consumption was captured by BARB is provided in Table 1 below, the accuracy of which was confirmed by Simon Bolus, research director of BARB (14 Jan 2020, personal communication).

Table 1: A summary of how the device used to consume BBC Three programmes, when those programmes were watched and whether those programmes were also shown on another BBC channel affects whether that consumption was captured by BARB.

<table>
<tr><th colspan="2">BBC Three programmes…</th><th>17 February 2015 –
16 February 2016</th><th>1 November 2018 –
31 October 2019</th></tr>
<tr><td>…consumed on PC, laptop or smartphone via iPlayer</td><td></td><td>Consumption not captured – BARB’s Project Dovetail[1] had not been fully rolled out in this period.</td><td>Captured by BARB’s Project Dovetail</td></tr>
<tr><td>…consumed on BBC Three’s linear TV channel</td><td></td><td>Captured as linear if the BBC provided BARB with audio reference file.</td><td>N/A (BBC Three’s linear TV channel no longer exists)</td></tr>
<tr><td rowspan="3">[after BBC Three closed its linear broadcast platform]

BBC Three shows consumed online through iPlayer on a TV set (e.g. Red Button, Xbox, smart TV etc.) that were also broadcast on linear BBC1 / BBC2 / BBC4…</td><td>…before broadcast on linear TV.</td><td rowspan="3">N/A</td><td>Captured as non-linear if the BBC provided BARB with the audio reference file.</td></tr>
<tr><td>…up to 28 days after broadcast on linear TV.</td><td>Attributed to linear (BBC1 / BBC2 / BBC4) so <u>not</u> in non-linear / Dovetail as BBC Three.</td></tr>
<tr><td>…more than 28 days after broadcast on linear TV.</td><td>Captured as non-linear if BBC provided BARB with the audio reference file.</td></tr>
<tr><td rowspan="3">[before BBC Three closed its linear broadcast platform]

BBC Three shows consumed online through iPlayer on a TV set (e.g. Red Button, Xbox, smart TV etc.)</td><td>…before broadcast on linear TV.</td><td>Not captured</td><td rowspan="3">N/A</td></tr>
<tr><td>…up to 28 days after broadcast on linear TV.</td><td>Captured as linear as long as broadcast on BBC Three & BBC provided BARB with audio reference file.</td></tr>
<tr><td>…more than 28 days after broadcast on linear TV.</td><td>Not captured</td></tr>
<tr><td rowspan="3">[after BBC Three closed its linear broadcast platform]

BBC Three clips/programmes on social media / YouTube watched via TV (e.g. smart TV, Xbox) [some full-length BBC Three programmes are on YouTube]</td><td>…before broadcast on linear TV.</td><td rowspan="3">N/A</td><td>Captured as non-linear if the BBC provided BARB with the audio reference file.</td></tr>
<tr><td>…up to 28 days after broadcast on linear TV.</td><td>Attributed to linear BBC1 / BBC2 / BBC4 (so <u>not</u> in non-linear/Dovetail as BBC Three) as long as broadcast on linear channel (BBC1 / BBC2 / BBC4). If not broadcast captured as non-linear. In either case audio reference file required.</td></tr>
<tr><td>…more than 28 days after broadcast on linear TV.</td><td>Captured as non-linear if the BBC provided BARB with the audio reference file.</td></tr>
<tr><td rowspan="3">[before BBC Three ended its linear broadcast platform]

BBC Three clips on social media / YouTube watched via TV (e.g. smart TV, Xbox) [some full-length BBC Three programmes are on YouTube]</td><td>…before broadcast on linear TV.</td><td>Not captured</td><td rowspan="3">N/A</td></tr>
<tr><td>…up to 28 days after broadcast on linear TV.</td><td>Captured as linear as long as broadcast on BBC Three & BBC provided BARB with audio reference file.</td></tr>
<tr><td>…more than 28 days after broadcast on linear TV.</td><td>Not captured</td></tr>
<tr><td>BBC Three clips on social media / YouTube watched on a PC, tablet or smartphone…</td><td>…any time</td><td>Not captured</td><td>Not captured</td></tr>
</table>

[1] The name BARB give to their project to “deliver total reach of programme … audiences across multiple screens.”

Data omissions

The following BBC Three shows, which were available on the BBC iPlayer during the 'after' period (1 November 2018 – 31 October 2019), were not included in the analysis for RQ2 and RQ3 because no data on their consumption was available from BARB:

- Let's Settle This: Big Narstie Will See You Now
- Muzlamic
- The Fight For Women's Bodies

The data on the length of episodes in the 'after' period – as provided by BARB – included some data that was clearly wrong. For example, some episodes were listed as being 480 minutes long. Where the data provided on episode length was obviously wrong, the erroneous data was corrected manually.

The following programme titles, watched on BBC Three linear TV in the 'before' period, could not be located in order to code their lengths and, as a result, they were not included in the calculations of the availability of programme genres before BBC Three ended its linear broadcast platform (RQ3):

- This is BBC Two
- Tennis

The following programme title, watched on BBC Three linear TV in the 'before' period, could not be located in order to code its genre and length and was, therefore, excluded from the calculations on programme genre availability and consumption (RQ3):

- BBC3 online barker

For seven episodes watched on the BBC iPlayer in the 'after' period, BARB could not provide the programme title; therefore, it was not possible to determine whether they were BBC Three programmes. If they were BBC Three programmes, which in all probability they were not, then they were not included in the analysis carried out for RQ2 and RQ3. They appeared in the data file as follows (without a programme title):

- 41998
- 42002
- 42011
- 42103
- 42160
- 42310
- 42439

References

BARB (n.d.) Device-based census data. Available at: https://www.barb.co.uk/about-us/how-we-do-what-we-do/device-based-census-data/ (accessed 10 March 2020).

BARB (2020) The UK Television Landscape Report: UK households by TV platform. Available at: https://www.barb.co.uk/tv-landscape-reports/tracker-uk-households-by-tv-platform/ (accessed 31 March 2020).

BBC Trust (2015) Final decision on proposals for BBC Three, BBC One, BBC iPlayer, and CBBC. 26 November. Available at: http://downloads.bbc.co.uk/bbctrust/assets/files/pdf/review_report_research/service_changes/decision/final_decision.pdf (accessed 16 March 2020).

Kavanagh D (2015a) BBC Three: What we've been up to. In: BBC blog, 12 August. Available at: https://www.bbc.co.uk/blogs/aboutthebbc/entries/aff22c20-b7cd-4e1f-ac92-363fdd1037ed (accessed 16 March 2020).

Kavanagh D (2015b) Ten things you should know about the new BBC Three. In: BBC blog, 20 January. Available at: https://www.bbc.co.uk/blogs/aboutthebbc/entries/a954ecf1-bdf0-45cf-933a-29536c665fff (accessed 16 March 2020).