

WATCHING THE DEVICES

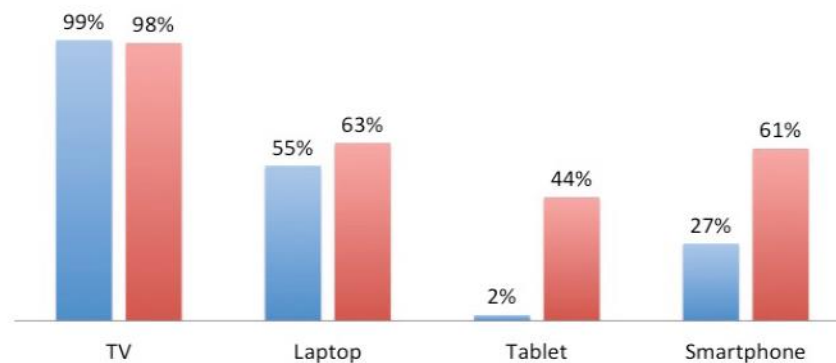
DO WE WATCH VIDEO DIFFERENTLY ON SMALLER SCREENS?

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INTRODUCTION

Ten years ago we got almost all our video entertainment through the TV set. While in most markets TV still has the biggest share of video viewing, we are increasingly watching via PCs and laptops, tablets and mobiles. Within this mobile viewing is the fastest growing sector, as we now can buy smartphones with bigger, clearer screens and easy access to Wi-Fi and fast affordable data. Figure 1 illustrates that access to these devices has grown dramatically over the last three years.

FIGURE 1. CHANGE IN UK ADULT ACCESS TO DEVICE 2011 TO 2014



This shift has been particularly marked among younger people, who don't have established habits and love the ability to watch and share video when and where they want.

The marketing and television industries pay great attention to changes in TV viewing, as TV advertising has been the biggest investment many brands make in direct communication with their customers. In the last 10 years we have seen the growth of multi channel TV and time shift TV, the growth of multi screening (where we are watching TV and also using at least one other device such as a laptop or phone) and now the growth of primary viewing of video on other devices.

All the changes have been associated with growth in total TV viewing, and some of the potential threats such as multi screening have turned out to be opportunities for greater engagement with programmes (as people interact with programmes and other viewers while they watch).

The latest development is more fundamental: previous changes meant we could watch more on the TV (and probably in better quality on a bigger screen), we could watch it when we wanted, and we could watch it and interact at the same time. This new change to viewing on non TV devices means that we are moving away from the TV in the living room, to a tablet or phone that could be anywhere we choose to be. And of course we are moving back to much smaller screen size and most likely viewing by ourselves.

THE CHALLENGE FOR RESEARCH

Channel 4 is a leading UK broadcaster with a specific remit to produce high quality and diverse programming, demonstrate innovation, experimentation and creativity, and to appeal to the tastes and interests of a culturally diverse society. They have a history of producing new and challenging programming, and have been actively involved in promoting new digital access to their programming via apps and online access channels.

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In late 2014 they were looking to understand a number of specific issues:

- How video on demand (VOD) viewing on devices, compared with classic TV viewing (on TV sets)
- How VOD viewing compared to classic TV in terms of the way ads were viewed
- How VOD viewing on a branded TV company platform like 4OnDemand compared with viewing VOD on channels like YouTube and news sites

The specific brief from Channel 4 was as follows:

"The Channel 4 digital sales team are under increasing pressure to prove the value of 4oD in the context of competing cheaper VOD offerings. We believe that Broadcaster VOD, and in turn 4oD is a trusted and engaging environment and that this in-turn has an impact on the advertising we deliver.

We would like to commission a study, which demonstrates the value of broadcaster VOD compared with other competing video advertising offerings. We would like to understand, from a user perspective, both the implicit & explicit impact of the 4oD environment on advertising."

Hypothesis and support

Our hypothesis at this stage is that: Viewers 'value' premium broadcast VOD commercials higher than other forms of, often cheaper, online VOD commercials (delivered by networks, including You Tube), and that this in turn has a positive impact on the way advertising is received.

Thinkbox recently undertook some research into audience need states (Screenlife 2); this highlighted a few different factors that led to our hypothesis:

- Ads are more accepted on broadcast VOD vs. Networks/ YouTube
- The content on broadcast VOD is highly anticipated
- Broadcast VOD viewing is centred around not missing out – a sense of avoiding being out of the loop and wanting to be current

Research objective

To demonstrate both the IMPLICIT and EXPLICIT value of the 4oD platform in effectively delivering advertising messages over and above other online video advertising offerings, giving us an impactful story to take to the media agency and advertiser audience.

Considerations

We are looking for innovative research techniques which will help us uncover new insights and make for impactful and memorable delivery of results to the market."

Given this initial brief and following on further discussion with the client, it became clear that the research should focus on actual behaviour, not just rely on self-report. The audience for media research is sophisticated and demanding and is familiar with the tendency of viewers to over (or more likely) under-state their interest in and viewing of ads, and also wary of industry figures that had claimed either big shifts to new media channels or that 'proved' TV still dominated the landscape.

What was required was something that was rooted in accurate observation of actual behaviour, and that delivered compelling evidence of how viewers were actually watching VOD programmes and ads.

THE RESEARCH DESIGN

The agency and Channel 4 decided on an approach that captured actual behaviour among existing Channel 4 VOD viewers, by recruiting regular viewers of a series of eight different programmes that had big audiences for VOD viewing, and that had a diverse audience profile. The programmes included Homeland, Hollyoaks, Supervet, Gogglebox, Made in Chelsea and 8 out of 10 Cats (a range of reality, drama, comedy and fly on the wall programmes that represented some of the most often watched output at the time).

We found five participants who watched each programme regularly on VOD across a range of devices, and then asked them to wait to watch the latest episode until the researcher came to visit. The nature of VOD is that this is an easy request to comply with, and we obviously timed interviews to reflect typical watching times for the programmes in people's homes.

FIGURE 1.

Programme	Viewers
8 out of 10 Cats	5
Gogglebox	5
New Grl	5
Homeland	5
24 Hours in police custody	5
Supervet	5
Hollyoakes	5
Made in Chelsea	5

The interviewer stayed with the respondent for approximately 1.5 hours during which time they were set up with eye tracking glasses, skin conductance sensors and their preferred device (they all watched programming on their normal laptop, tablet or phone, in their normal environment, to ensure as much ecological validity as possible).

The explanation of purpose was important as we did not want undue focus on the ad breaks: we explained that the primary reason for the study was to look at how easy to use the VOD platforms were, and how well the user could find and watch the right video. This was true as at the time of research Channel 4 were about to change their VOD platform, and information about the usability of the platform and specifics of layout, search function and programme listing were all of value.

The interviewer asked them first to watch the programme they normally watched as they normally would, and then moved out of eyeshot. We set up a number of pilot sessions to estimate if the test environment was interfering with the natural behaviour of the respondents, but the evidence from the pilot tests was that the behaviours we saw were as natural as could be hoped for,

We had run previous tests where we had asked people to wear eye track glasses and SCR sensors for a whole day as they went about their normal daily routine, and we had some evidence from this about what might be expected in terms of attention and arousal while watching TV and video on demand on devices. We saw similar levels of stable brain arousal levels during this test and the evidence from the eye-tracking recording was that attention was strongly focused on the programme being viewed.

In a sense this is not surprising as we had recruited regular and enthusiastic viewers of programmes and they were watching the latest episode of these programmes for the first time, so they were likely to be engaged by the programme, but it was reassuring to see that the test did not seem to be interfering with their engagement or enjoyment.

LOOKING OUT FOR THE HAWTHORNE EFFECT

The design of the test was intended to ensure as natural behaviour as possible in the context of a research test, and to this end there were some specific aspects of the design we believed to be important:

1. Building on natural behaviours – we recruited existing VOD viewers to watch programmes they already had a taste for, on devices they owned and used for VOD viewing
2. Using a normal environment – we deliberately chose to conduct tests in home in the normal viewing environment where VOD viewing was done, to mimic normal viewing. It would have been easier and more cost effective to use a viewing lab but the environment would have been un-natural
3. Limited direction of focus – we only asked people to do what they normally did, rather than try out new behaviours
4. Careful briefing – we explained that we were using an automatic way of recording how they watched video, rather than any more specific or directive briefing
5. Recording brain activity (via SCR) and eye movement to identify how 'normal' their viewing behaviour was: we already had information typical TV viewing levels so we could use this to identify if the respondents in this test were responding artificially or unnaturally
6. Follow up interviews where we asked respondents to recall the experience and compare it with their normal VOD viewing to detect if they felt the experience was unnatural

In fact the video analysis and SCR feeds from the respondents, and their own evidence from recall interviews, strongly suggested that the experience of viewing with the glasses on had not influenced their viewing experience. We suspect that compared with active tasks such as driving, cooking or working, the effect of recording behaviour while engaged in the relatively passive activity of watching video may be less prone to experimental effect.

TESTING OTHER VOD PLATFORMS

Following their viewing of their preferred programme we then asked them to view some other regularly viewed programmes on different premium VOD channels. These included the main commercial channel, ITV, and the public broadcasting channel BBC i Player.

The protocol was to ask them to choose a programme or genre they regularly chose to watch and to view that for at least 5 – 10 minutes. This was consistent with the stated aim of the research to identify the ease of use of VOD platforms.

We then asked them to do the same with YouTube and news channels, with a similar instruction to find content they were interested in and watch it and then go on and find further content.

As they watched the programme (and associated ads) the eye tracking glasses captured their gaze and focus in great detail as illustrated in figure 2 (the circle shows the centre of focus).

FIGURE 2.



The output from this process was over 40 hours of video of respondents viewing a mix of VOD platforms, searching for programmes and content, being exposed to ads and other promotional material and choosing to watch, skip or click away from ads and content. This replicated as closely as possible the real life experience of VOD on device viewers, and we had detailed film of what they watched and where they were focused, combined with second by second data on the level of related brain activity.

At this point we thanked the respondents and agreed to revisit them (and show them some footage) about a week later.

WHY EYE TRACKING AND SCR?

We used eye-tracking glasses as we wanted to understand exactly how people viewed the content and the ads on their chosen device (and whether the device screen size had an effect on viewing behaviour). The glasses we used were the latest generation so were both lightweight and unintrusive, and were extremely accurate in identifying where on a small screen the pupil was focused.

The output from the eye tracking glasses meant that we had an accurate video record of exactly what was on screen, and where the respondents' attention was on a moment-by-moment basis. This would allow us to calculate the percentage of time that attention was on screen during programme and ad breaks, and also to identify specific behaviours around use of on screen menus, skip buttons and in programme pop up ads.

We used SCR recording so that we could identify the level of cognitive load associated with viewing programming, ads and searching for content. This would allow us to infer whether the respondent was engaged in the programme or ad, or distracted or multi-tasking. Typically we find that viewing video content is a relatively low cognitive load activity while skin conductance levels, as a measure of autonomic nervous system activity, are much higher when we are multi-tasking.

We worked with our academic partners at the Durham University Department of Cognitive Neuroscience in analysing the data from the SCR and eye tracking measures and they helped us come up with an accurate way of measuring average autonomic system levels during different video segments, as well as peaks and troughs, and then attributing likely explanations to those data.

Another advantage of the SCR data is that it allowed us to search within each respondent's record to identify moments of high peak or average activity, and then to examine the video records to gain insight into what was triggering this. By

combining SCR and video eye tracking information we were able to get a clear picture of what was being viewed, what was being ignored and what was associated with higher or lower brain activity levels.

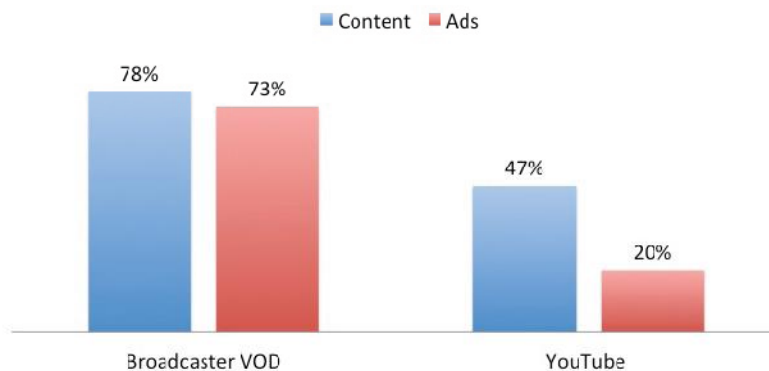
DATA FINDINGS AND FOLLOW UP LEARNINGS

A number of key findings emerged from analysing the video attention data. This was done on a manual basis by observing the proportion of time that attention was focused on the video being played vs. other screen activity (for example the menu bar in YouTube) vs. attention off screen entirely.

The key finding was as in figure 3: we saw that a high proportion of the time when the broadcaster VOD programme was on, attention was on the actual video. This was significantly higher than for YouTube content.

We also saw that the level of attention to the ads in 4OD and ITV programmes was very high, and almost as high as the programmes. However the level of attention to ads on YouTube was much lower, with levels only a quarter as high.

FIGURE 3. VOD AND AD ATTENTION



The other striking finding was that the level of brain activity recorded by SCR was very similar for the premium VOD programming and advertising. The best way of interpreting this is to see the viewer as being in a similar mental state when watching the programme and the ads.

FIGURE 4. RELATIVE LEVELS OF SCR ACTIVITY



This is consistent with the similar levels of on screen attention: effectively the viewers tend to watch the whole programme including the ad breaks in a similar and attentive state, with little distraction from the screen during the whole viewing experience.

However the task of viewing short form video on YouTube or news sites, and the associated ads, seems to be approached in a different way, with attention moving around the whole screen with limited focus on the video element, and a notably higher level of brain activity.

A similar pattern was found across demographics and viewers of different programme types, and seems to demonstrate a general finding about how the different on device video formats are being used by viewers.

To find out more we went back to our test sample and showed them video excerpts of their own eye tracking (we did not show the SCR data, but used it to help identify segments of interest).

A number of consistent themes emerged:

1. Respondents were not surprised at the evidence they watched the programmes on device with a high level of attention (higher than we have seen in similar tests of viewing on conventional TV). Comments such as 'if I am watching on the tablet, I can really pay attention' and 'it is easier to focus on the screen when you have it right in front of you' represented a common point of view. There was no evidence of any sense that watching on device was not as good as watching on TV, except when shared viewing was deemed very important.
2. Respondents were surprised they watched so much of the advertising on the premium VOD channels. They expected they would look away or put the screen down, but saw they were tending to keep watching right through the breaks. They often justified this by comments such as 'there are not as many ads on catch up' or 'the ads are more likely to be aimed at me' or 'you just don't mind them so much'. This reinforces the decision to use a behavioural based data gathering approach, as if we had asked people what they thought they did it is likely they would claim to avoid ads more than actually happens. We have had experience of this in previous studies where people claim to avoid ads on conventional TV but actually (when we film them) watch the majority of the ads they might be exposed to. This sense of relaxed acceptance helps explain the similar SCR scores we saw for the ads and programmes; the viewing experience was largely homogeneous.
3. Respondents were not surprised at the limited attention they showed to non-premium VOD content or ads. They reported that they often jumped from video to video, until they found the right one, and that while watching one video they were often reading comments about it or searching for the next one. We saw exactly this behaviour in the eye track data, where attention was more focused on the surrounding text than the video playing even when the video was content they claimed an interest in. Additionally we saw a lot of active avoidance of ads when the pre roll or other ads were running in these environments. On YouTube specifically there is often a Skip Ad function and we saw people look at this as it counted down, or keep returning to the Skip Ad button.
4. We asked respondents what they were doing when they were watching non-premium VOD (in order to help understand the higher arousal levels we saw in the SCR data) and found a consistent pattern emerged. People report that while watching a video they are often thinking of other videos they might also look at, so they are planning future searches, or simply evaluating other videos that are listed. They also discussed often looking at comments of other viewers and thinking what ratings to offer themselves. Overall the experience of watching short form video is very different to watching a 30 or 60 minute programme, as the expectation is that the viewing session will be shorter, it will probably include some good and some poor quality content, and that to get the best out of it you need to actively search and plan ahead. On discussion with the Durham University team they felt this helped explain the higher SCR levels, as the additional cognitive load was directed toward planning and searching as well as processing and enjoying the current video experience.
5. The viewers' opinions about ads within non-premium VOD were also revealing. Comments such as 'the ads are too many and too long compared with the films' were common, with people reluctant to watch a 30 second ad to view a three minute video. The targeting and quality of the ads was seen as less relevant 'when you watch catch up the ads seem to fit, but with this you get random ads for anything'. The lack of targeting, that can include ads for adult relevant products alongside kid's videos, was seen as evidence that the advertising was not as well planned: 'it is scatter gun, could be ad for anything'.
6. The option to Skip Ad with a countdown was often felt to be a tacit recognition that the ads were not welcome, and you were almost encouraged to avoid them 'with catch up, it is like watching programmes on TV that are real quality, you want to watch them and don't mind the ads, but on this you feel the ads are a bit of an intrusion'.

CAVEATS AND CAUTIONS

First, it should be clarified that this was a small-scale exercise, with a total of 40 regular VOD viewers. It is normal for eye-tracking studies to have relatively small samples, so this is certainly not unusual in terms of the sample size used (there is general acceptance that we are measuring physiological reactions rather than attitudes and thus smaller samples are acceptable).

However, the test would benefit from being repeated with a larger sample, although it must be said that the data were internally consistent.

We interviewed regular viewers of Channel 4 programmes, so it could be argued that this introduced a bias toward the channel. However, our experience of programme research tells us that the loyalty is usually to the programme rather than the channel per se. These were Made in Chelsea or Gogglebox fans, rather than Channel 4 fans.

We also ensured that all were regular users of short form video on demand on platforms such as YouTube, and were users of BBC I Player, so they were used to a range of platforms rather than being biased to any one.

When watching premium VOD the ads are usually played out full screen as is the programme (the app is designed to work that way). When watching YouTube or news sites with embedded video this is not necessary, although you can select a full screen view option. However this is the environment the video or the ad is being viewed in, so to that extent it is a natural and fair test. We did not ask viewers to do anything other than what they normally did, so if they chose to view YouTube full screen they could, and if they didn't that was what we saw them do. In almost all cases they chose not to go to full screen even when (as with a mobile app) all you need to do is rotate screen to go to full screen mode.

What we set out to do was a naturalistic test, that came as close as possible to capturing how video is viewed in the home, on the respondent's own terms. We also set out to try and understand something of the mental state that is associated with viewing video on device, and feel that the combination of SCR and eye tracking, and follow up discussion with respondents, has helped throw more light on this emergent behaviour.

USING THE DATA

Channels 4 used the findings of this study as part of the relaunch of their VOD platform, and have subsequently presented it to advertising and media agencies and advertisers. The findings have been used to help reinforce the sales story for VOD ad spots. As VOD was seen as a new and untried sales channel it had initially been more difficult to convince advertisers and media agency planners of the value of VOD spots vs. conventional TV spots.

This research has allowed a much more positive story to be portrayed about the engagement with premium VOD, the attractiveness of ad spots within it and the relative benefits of premium VOD ads vs. other video channels.

One of the reasons it has been so effective is that the data is compelling, with substantially higher attention figures for the premium VOD ads. But equally important has been the video footage that shows what it looks like to be a viewer, where the planning team can watch video and see ads being viewed from the viewer's own point of view. This ability to empathise with the data by seeing through the viewer's eyes has allowed strong metrics to be believed in by research hardened media planners and buyers.

In the words of an attendee at a recent seminar, "I can see myself doing that".

Crucially, from the client's point of view, it has also contributed towards C4's record video growth of 24% this year.

As an influential media professional said:

"The All 4 'Not All VoD is the same' research has been extremely useful for demonstrating to clients the nuances in viewer behaviour in different online video environments. We have long held the belief that different video environments satisfy different need states of viewers. It's great to finally have some research to back this belief up. With the video landscape constantly evolving it's essential to have research like this that frames the changes in terms of viewer behaviour". Ben Hancock, Business Director, Mindshare

FUTURE APPLICATIONS OF TECHNIQUE

We think that the combination of eye tracking and SCR technologies offers real scope for capturing and understanding behaviours. The physical performance and light weight of the latest glasses make them a much more practical proposition for in field or in home research, and the latest generation Bluetooth enabled SCR bracelets allow for even easier capture of skin conductance (and heart rate) data, so that we can measure video, audio and physiological / autonomic activities in tandem without interfering with the respondent's experience.

However we would counsel against too much automation: as we gain more information about where we look and how our brains are acting, it is all the more important that we combine this with ethnographic follow up interviewing to find out the respondents' experience and perspective. No single metric can be taken in isolation, otherwise we might think that higher

arousal during some ad exposure is of value. In some contexts it could be, if the arousal was directly related to the ad experience and the viewers' interest in the ad, but it is misleading when the arousal is more linked to the viewer thinking about what film they should choose next.

These tools are great additions to the researcher's armoury, but their power means they must be used with wisdom and insight, and that context will always be a critical element in the analysis.

REFERENCES

Boucsein, Wolfram, 2012, *Electrodermal Activity*, Springer,

Figner, B., & Murphy, R. O., 2010. Using skin conductance in judgment and decision making research. *A Handbook of Process Tracing Methods for Decision Research*

Ofcom: communications market report 2014

<http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr14/uk/>

Thinkbox: the view from the sofa <http://www.thinkbox.tv/server/show/nav.2165>

Thinkbox: screen life 2

<http://www.thinkbox.tv/research/screen-life-tv-in-demand-summary/>

Thinkbox: truth about youth

<http://www.thinkbox.tv/research/truth-about-youth-media-and-advertising/research/truth-about-youth-media-and-advertising/>

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