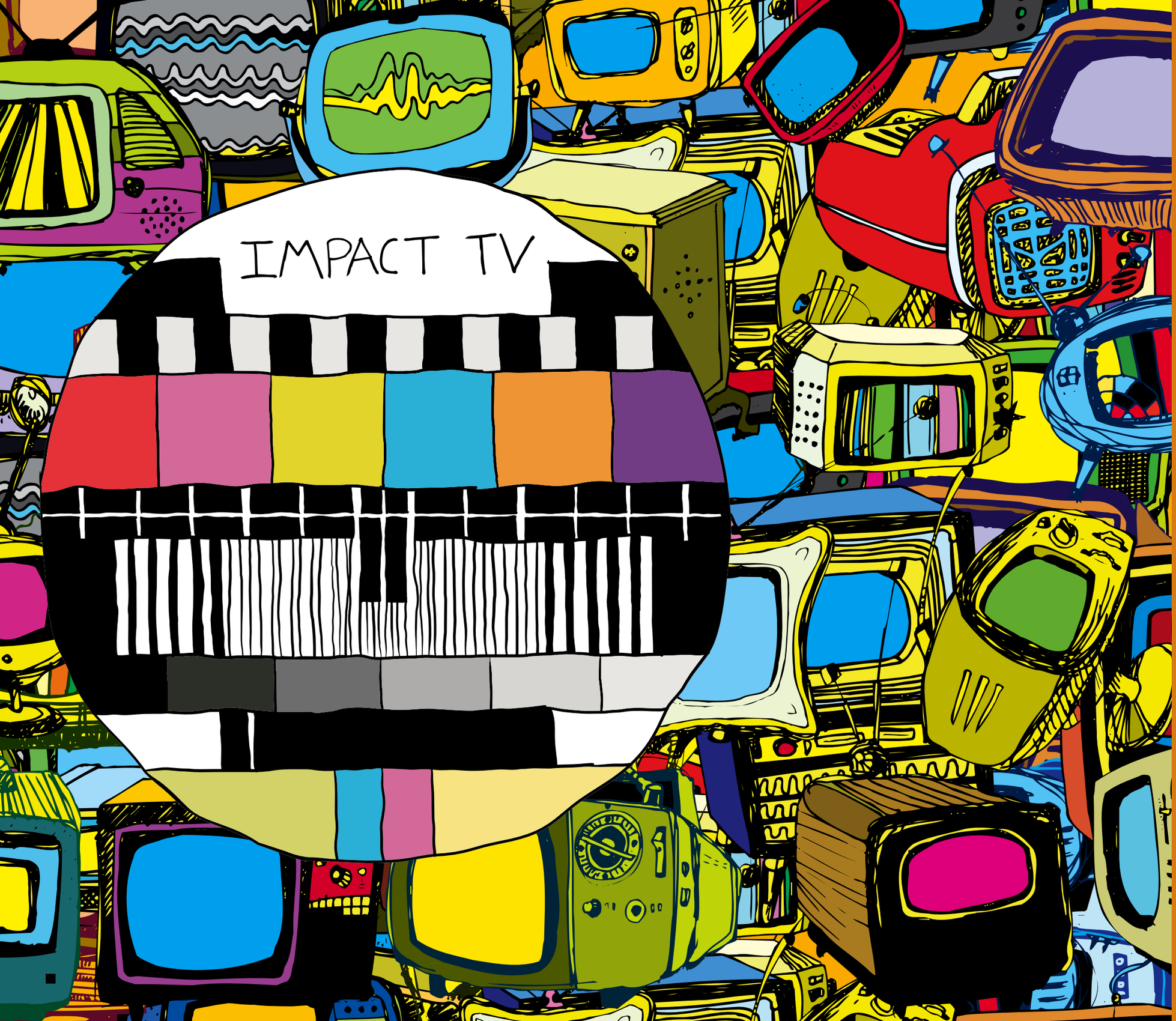


Divided attention

Now that TV content can be accessed from anywhere, at anytime, audience measurement has had to evolve past its traditional headcount approach. **Bronwen Morgan** explores the changing patterns of TV consumption, and what this means for advertisers and researchers.

Television audience measurement used to be about counting eyeballs in the world's living rooms. But with the rise of video on demand (VOD) and streaming services, as well as the time-shifted viewing enabled by increasingly sophisticated set-top boxes, audiences are now consuming content across multiple screens and at multiple times. This means that the challenge of understanding who's watching what, where, when and with whom – as well as what those connections are worth to advertisers – is becoming more complex. As media owners diversify to provide cross-platform viewing opportunities, providers of media research must also break new ground in measuring what really matters to advertisers and media agencies.

The changing landscape

There are many statistics, from many sources, that inform the picture of television viewing in the UK today.

According to Barb (Broadcasters' Audience Research Board), which provides the industry standard audience measurement service, just under 70% of UK households now own a personal video recorder (PVR) (see box out 1). Cumulatively, Barb says, the amount of 'catch-up' TV being watched climbs as more and more people acquire PVRs. But it's not necessarily increasing on a pro-rata basis: between January 2006 and August 2014, live TV

viewing fell from 98.8% of total viewing share to 89.9%, while time-shifted viewing rose from 1.2% to 10.1%.

"The concept of time-shifted viewing is not new for television," says Justin Sampson, chief executive at Barb. "Before PVRs you had the video recorder, which first came out in the 70s, so actually the concept of being able to watch a programme at a time other than when it was scheduled is nothing new."

The real transformation, says Sampson, has come in the form of the introduction of digital products – such as the Sky+ or Virgin On Demand box (TiVo) – that allow users to record programmes and play them back whenever they want. While many claimed at the time of Sky launching its first PVR, around 12 years ago, that its introduction heralded the death of linear TV, Sampson claims this is far from the case.

"There has been [since the launch of Sky+] a growth in the actual amount of time spent time-shifting – either recording what you want to watch and watching it later or going on to one of the on demand services – but the pace of behavioural change is not as quick as some commentators would have you believe," he says. "I meet a lot of people now who will say to me, 'Oh I never watch any live TV, it's all pre-recorded or on demand,' but the figures just don't bear that out."

Data from Ofcom and the UK broadcasters show that broadcaster VOD accounts for around 2.5% of total viewing. While this represents a small share of viewing compared with live TV, it's important to note that 80 billion hours of live TV is watched per year. So 2.5% on top of that is still a significant amount of time spent watching VOD.

Nevertheless, the convenience of the medium does beg the question – why isn't that share higher? "You assume that on demand TV offers you the purest form of entertainment that you could possibly want. It's what you want, whenever you want it," says Neil Mortensen, research and planning director at Thinkbox, the marketing body for commercial TV in the UK. "So why doesn't everyone do it all the time?"

Need states

The research team at Thinkbox explored this with a study looking into what needs on demand fulfilled compared with other types of TV. To do this, the Thinkbox team used a deprivation exercise: they took on demand TV away from respondents for four days in a row, then gave it back to them. They then did the same with live TV: took it away for four days and then gave it back. The results, says Mortensen, were surprising. "They [viewers] felt they could completely and utterly live without live TV, because they didn't think they watched any. They also thought they would be absolutely devastated if on demand TV was taken away."

> "If managers simply ask whether the score went up or down, the tracker may not be doing the right job"

What happened, says Mortensen, was that respondents were indeed upset about losing on demand TV: they missed the choice and the accessibility that it afforded them. But according to Mortensen, when live TV was taken away respondents felt that some of the fundamental needs they have as a human being weren't being satisfied.

"Taking on demand viewing away from people was like taking away their chocolate, like taking away a treat that they didn't have all the time but they really enjoyed," says Mortensen. "But taking away live TV was like taking their food away. People forgot that a lot of the live TV acted like an electronic babysitter. All of a sudden mums were trying to fiddle around for on demand content that fitted with what their kids wanted at that time rather than just flipping the telly on."

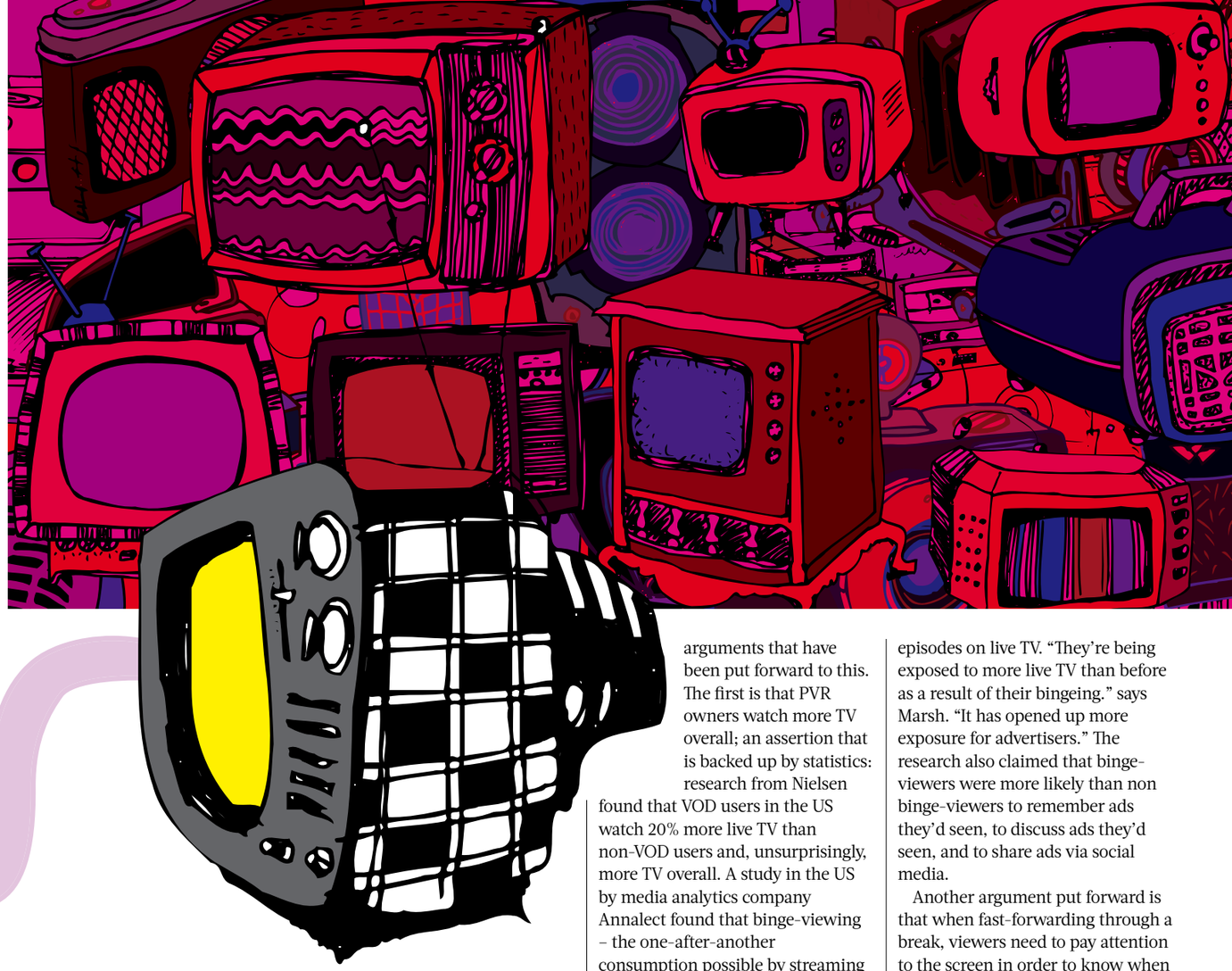
It is also widely accepted that certain genres don't translate well to on demand viewing: sport, news, children's TV and voting shows such as Britain's Got Talent and X Factor are much less commonly time-shifted compared with arts, drama, documentaries and film. The most likely age-group to time-shift, according to Barb's Sampson, is 25-34 year olds, while the least likely to time-shift are over 65s.

Skipping behaviour

Media agencies, unsurprisingly, have been closely monitoring the nation's viewing habits. Time-shifting and, in some cases, on demand viewing, can allow viewers to skip ads, interfering with the 'opportunity to view' metric that media companies use as their currency for marketing advertising slots.

In the 1990s, PVR company TiVo carried out some work on TV-watching behaviour in the US. It found that commercials were likely to be fast-forwarded during the programmes that people liked most (this is fairly intuitive given that these were the programmes that tended to be recorded for later playback in the first place). The study found that the average commercial break was skipped in 54% of cases, and that avoidance was particularly apparent during the most 'highly involving' programmes.

But Les Binet, head of effectiveness at communications agency Adam & Eve DDB, doesn't believe it's a big problem. "A lot of people were very jumpy about what this [time-shifting] was going to do to the advertising business," he says. "The assumption was that people would be time-shifting all their viewing and skipping all the advertising. That hasn't happened."



Nevertheless, this opportunity to skip ads, claims Phil Shaw, head of digital at Ipsos ASI, has led to a decline in ad recognition levels. "We've noticed over time an overall softening in ad recognition – that is, people's ability to remember seeing ads on TV. Our theory is that it's down to an erosion of frequency," says Shaw. "You can still achieve the same reach, but frequency is being eroded, and that's because viewers are able to skip, tune out, change channels. People are able to get past the ads and are not necessarily paying as much attention."

There are a number of counter arguments that have been put forward to this. The first is that PVR owners watch more TV overall; an assertion that is backed up by statistics: research from Nielsen found that VOD users in the US watch 20% more live TV than non-VOD users and, unsurprisingly, more TV overall. A study in the US by media analytics company Annalect found that binge-viewing – the one-after-another consumption possible by streaming and on demand services – can also drive live TV viewing.

"We found that nearly half of our respondents – binge viewers – were finding new programmes as a result of their binge viewing, then continuing to watch those shows on live TV," says Dr Pamela Marsh, director of Primary Research & Insights at Annalect (in this case, binge-viewing is defined as watching three or more episodes of the same TV show in one sitting). Marsh also found that in addition to programme discovery, half of 'bingers' reported that they would start by watching catch up TV on an on demand or streaming service and would then tune in to watch new episodes on live TV. "They're being exposed to more live TV than before as a result of their bingeing." says Marsh. "It has opened up more exposure for advertisers." The research also claimed that binge-viewers were more likely than non binge-viewers to remember ads they'd seen, to discuss ads they'd seen, and to share ads via social media.

Another argument put forward is that when fast-forwarding through a break, viewers need to pay attention to the screen in order to know when to stop skipping and as such, are still exposed to the ad content in some way. Research by BSkyB has suggested that even fast-forwarded ads could be shown to have some effect on viewers' brand perceptions, although this was only the case if the ads concerned were already familiar to them.

It's also worth remembering that skipping ads is not a new behaviour. "We've always been able to avoid ads," says Agostino Di Falco, partnerships director at Channel 5. "It used to be that you could leave the room to make a cup of tea or channel hop during ad breaks. Now in addition you can fast forward via PVR. For the 10% of time when

viewers watch a programme via PVR, 35-40% of ad breaks are viewed anyway. This compares very favourably to ad avoidance in other media."

Target practice

Another important point is that only ads watched at normal speed are counted by Barb and as such, paid for by advertisers. Ads that are 'speedwatched' are not paid for.

As Les Binet explains, this, coupled with the fact that the cost of TV advertising spots has gone down over the past couple of decades, means that the ROI from advertising isn't necessarily reduced. "This big fear that time-shifting was going to destroy ROI is just not true at all," he says.

Another modifier of ROI in the age of multi-platform TV has been more sophisticated targeting. This can be in the form of targeting by demographic – a practice that has been commonplace for years, but which has been strengthened by the explosion in the number of channels and the amount of data available on TV viewers – or in the form of targeting by platform.

> "The measures that businesses are currently tracking are not necessarily the right ones"

An example of the former is Ad Smart, an approach launched by Sky in August 2013 that delivers different ads to different Sky households watching the same programme. Ads are served via set-top boxes within live ad breaks, and are tailored to the audience using an algorithm that takes into account the projected linear audience, alongside data that customers provide when they subscribe to the service. This is then supplemented with externally-sourced behavioural data. "The end result is that you see more ads that are more relevant to you and fewer that won't interest you," says Matt Beake, corporate communications manager at BSkyB. "So if you're a family with young children you'll be shown a Pampers ad rather than an ad for a Saga cruise."

Channel 4 has also begun to offer targeted advertising on its 4oD service. Basic demographic details on viewers are gathered by encouraging them to register to view 4oD. While the service can still be accessed without registering, more and more content – such as archived content and 'download to view' – is being placed behind the registration wall. According to research from comScore and MTM London, demographically targeted campaigns on 4oD resulted in overall efficiency improvements of 19%, while advertising effectiveness was up 11% in terms of spontaneous brand awareness and 39% in terms of overall advertising awareness.

While this level of targeting has been made possible through advances in set-top box technology, it only applies to live TV (viewers watching the same content that has been recorded would see standard ads). But according to Beake, one of Sky Media's current areas of focus is looking into how to better monetise VOD assets, bringing in an extra dimension of personalisation. "When you're playing something at a particular time, maybe there's an opportunity to advertise different types of product depending on when the media asset is played, or where the media asset is played," he says.

Context is key

Beake is alluding to the idea of the influence of context on viewers'

TV NEED STATES, ACCORDING TO THINKBOX RESEARCH

According to Thinkbox's research there are six core reasons that we watch TV, which translate to six 'need states', each shaped by content, context and device. All viewers are always in one of these states, and each one has a particular psychological set-up in which a particular content is more valued or appreciated. The theory is that if advertisers match these need states and narratives, this should lead to a better result for their brand.

Unwind
This need state reflects the need to de-stress from the pressures of the day.

Comfort
This need state is around shared family time, incorporating feelings of togetherness, rituals, family and routine.

Connect
This relates to the idea of 'plugging in' and feeling a sense of connection to society, to time or to place.

Experience
This links to an idea of a need for fun and a sense of occasion to be shared.

Escape
This need state represents the desire to be taken on an enjoyable journey to another time and place.

Indulge
This reflects the need to satisfy guilty pleasures with personal favourites, usually alone.

receptivity to advertising. Given that time-shifted and VOD viewing can cause these factors to vary widely, it's an important area to understand. Thinkbox looked into this (see box 2) with its Screen Life: TV in demand study and concluded that there are six 'need states' experienced while consuming content. "Each need state has a particular psychological set up in which a particular content is more valued or appreciated," says Mortensen. "We wanted to give advertisers these set ups so they could match these need states and narratives and hopefully get a better result for their brand."

VOD viewing meets two separate need states: 'escape' and 'indulge', as there is such a heavy focus on the content. "Advertising in the 'escape' need state is the most challenging," he says. "There are high levels of attention and high levels of appointment-to-view, so advertisers need to work harder to get ad acceptance."

The best way to leverage this need state, says Mortensen, it is to fill slots in VOD viewing with advertising that fits escaping. Something that builds an identity for the consumer; offering them status or cool, such as luxury cars, jewellery and aspirational travel, for example.

While the debate continues around how changes in TV viewing affect exposure to advertising, there is one aspect of VOD and streaming that is hard to argue with: it produces enormous amounts of viewing data. While live TV relies on representative sampling to report viewing figures, on demand and streaming services can record each individual interaction. Will this 'big data' approach start to replace more traditional panel-based measurement?

TV measurement

The 'gold standard' TV ratings in the UK have been gathered by Barb since 1981. Barb uses a representative panel of around 5,100 homes (12,000 people), installed with metering equipment (peoplemeters) that records television viewing on PVRs, DVDRs and VCRs, as well as standard set-top boxes by detecting whether TV sets are on or off, and what channels they are tuned to. Panellists are required to 'register' and 'deregister' when they enter a room containing a TV set that is switched on – the Barb definition of TV viewing – and their demographic information is added to the overall viewing data. Since 2013, the data has also included programmes that are recorded and watched up to 28 days after broadcast.

> "If managers simply ask whether the score went up or down, the tracker may not be doing the right job"

But some people believe that in the age of big data, this nationally representative approach is no longer fit for purpose. "There are 25 million homes in the UK and the only measurement that the entire industry can rely on is based on 5,100 households. That's a pretty big gap," says Aki Tsuchiya, founder and managing director of Streamhub, which supplies real time video analytics to the media industry. "No matter how amazing the statistical weighting of those 5,100 households are, it will never be truly representative compared to what 'real' data can bring in." Tsuchiya argues that smaller channels in particular cannot rely on Barb data, as they often represent less than 1% of viewership and as such there is not enough granularity in the data. He believes the Netflix model, of making commissioning decisions based on complex analysis of massive amounts of viewing data, is the only way forward for TV in the future.

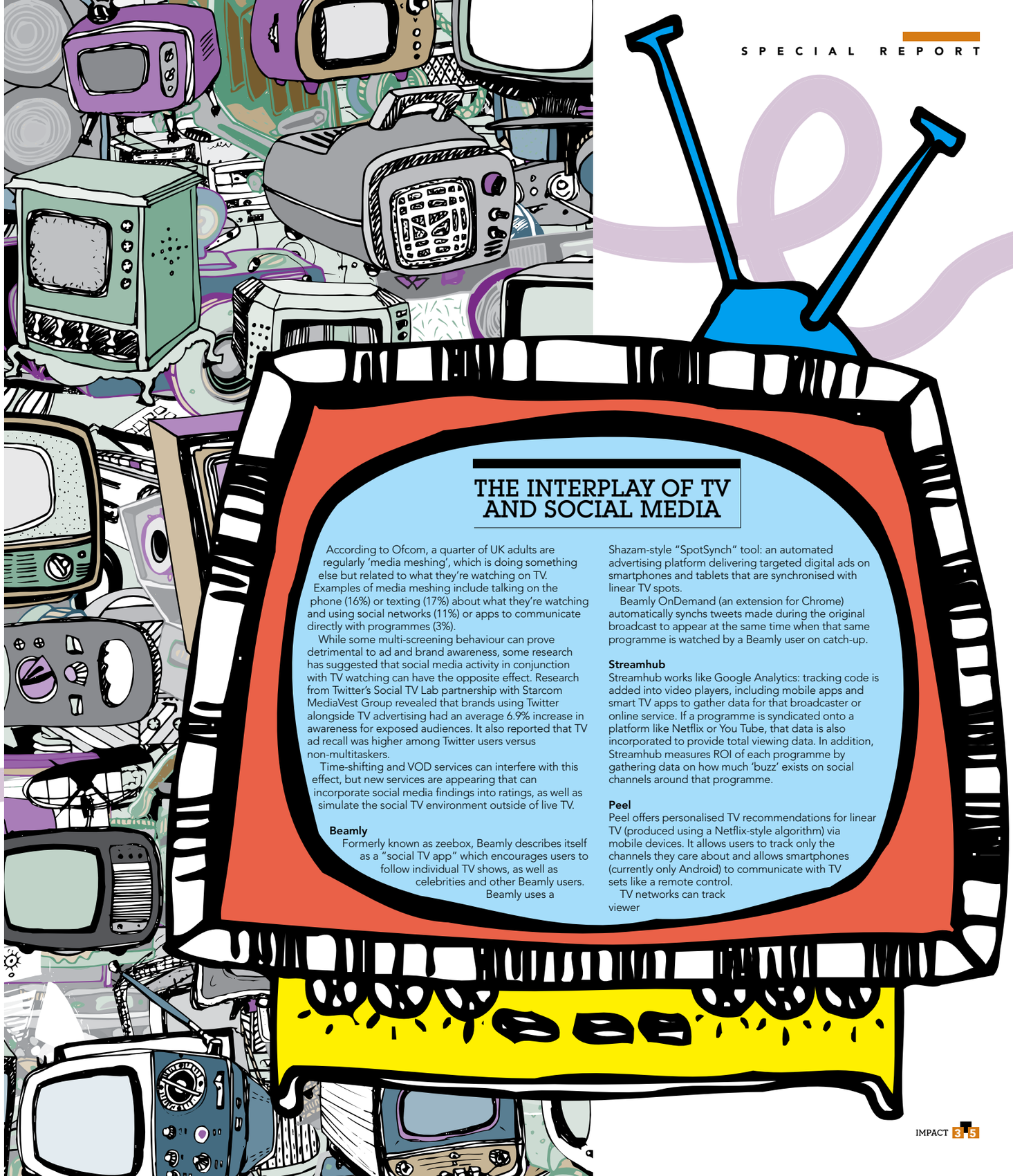
Similarly, a report published by Warc in 2011 pointed to passive television measurement as representing the future. This approach, the report says, has a number of advantages over the peoplemeter approach favoured by Barb: it offers continuous viewing data over long periods for very low incremental cost; it can, in theory, be combined with set-top box 'census' data in order to add demographic context; and there is low dropout as the burden on the respondent is low.

It could also be a step towards the 'web-style' ad exposure tracking that some researchers, such as Hamish McPharlin, director at Decipher Media Research, are hoping for from TV measurement. "We don't yet have great visibility on being able to survey someone that we know has seen something on TV," says McPharlin. "We can tag up an online ad, drop a cookie, find that person and send them a survey. We've got proof they've seen it. You can do that online, you can do it on smartphones, you can do it on tablets. The one place you can't do it is on TVs. You have to resort to more expensive means like putting cameras into people's homes and getting them to keep diaries. And it's all a bit expensive and manual."

Project Dovetail

Another drawbacks to collecting passive, device-based data, says McPharlin, is that web-tracking assumes one person per screen – which on a smartphone may be accurate, but on a TV is less certain – while the Barb panel can provide exact information on how many people were in the room when a programme was watched.

Another is that it offers no information on that all-important idea of context. "Passive works well in terms of measuring activity. What's still missing behind that is the motivation of why," says Jim Ford, global development director at ▸



THE INTERPLAY OF TV AND SOCIAL MEDIA

According to Ofcom, a quarter of UK adults are regularly 'media meshing', which is doing something else but related to what they're watching on TV. Examples of media meshing include talking on the phone (16%) or texting (17%) about what they're watching and using social networks (11%) or apps to communicate directly with programmes (3%).

While some multi-screening behaviour can prove detrimental to ad and brand awareness, some research has suggested that social media activity in conjunction with TV watching can have the opposite effect. Research from Twitter's Social TV Lab partnership with Starcom MediaVest Group revealed that brands using Twitter alongside TV advertising had an average 6.9% increase in awareness for exposed audiences. It also reported that TV ad recall was higher among Twitter users versus non-multitaskers.

Time-shifting and VOD services can interfere with this effect, but new services are appearing that can incorporate social media findings into ratings, as well as simulate the social TV environment outside of live TV.

Beamly

Formerly known as zeebox, Beamly describes itself as a "social TV app" which encourages users to follow individual TV shows, as well as celebrities and other Beamly users. Beamly uses a Shazam-style "SpotSynch" tool: an automated advertising platform delivering targeted digital ads on smartphones and tablets that are synchronised with linear TV spots.

Beamly OnDemand (an extension for Chrome) automatically synchs tweets made during the original broadcast to appear at the same time when that same programme is watched by a Beamly user on catch-up.

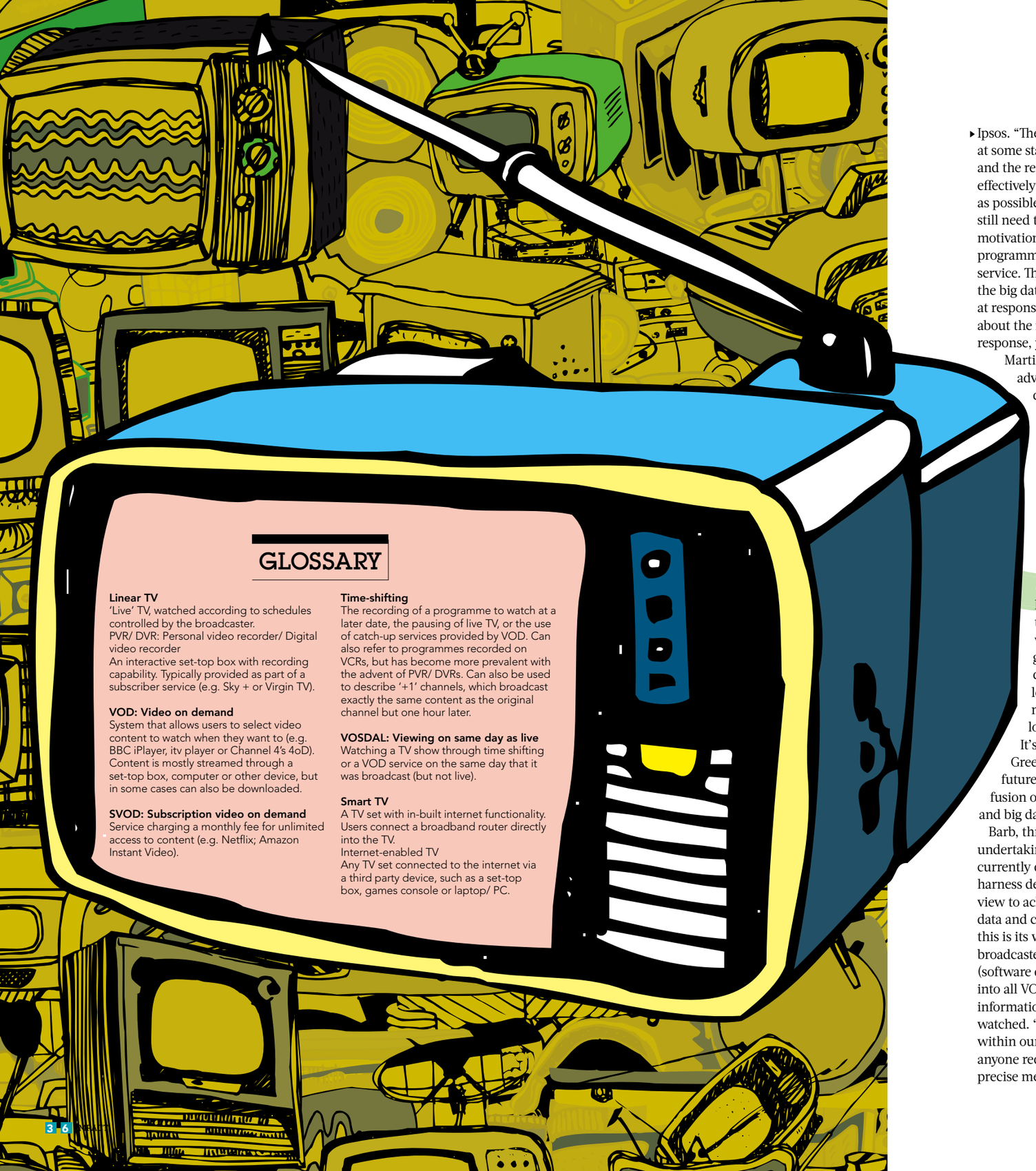
Streamhub

Streamhub works like Google Analytics: tracking code is added into video players, including mobile apps and smart TV apps to gather data for that broadcaster or online service. If a programme is syndicated onto a platform like Netflix or You Tube, that data is also incorporated to provide total viewing data. In addition, Streamhub measures ROI of each programme by gathering data on how much 'buzz' exists on social channels around that programme.

Peel

Peel offers personalised TV recommendations for linear TV (produced using a Netflix-style algorithm) via mobile devices. It allows users to track only the channels they care about and allows smartphones (currently only Android) to communicate with TV sets like a remote control.

TV networks can track viewer



GLOSSARY

Linear TV
'Live' TV, watched according to schedules controlled by the broadcaster.
PVR/ DVR: Personal video recorder/ Digital video recorder
An interactive set-top box with recording capability. Typically provided as part of a subscriber service (e.g. Sky + or Virgin TV).

VOD: Video on demand
System that allows users to select video content to watch when they want to (e.g. BBC iPlayer, itv player or Channel 4's 4oD). Content is mostly streamed through a set-top box, computer or other device, but in some cases can also be downloaded.

SVOD: Subscription video on demand
Service charging a monthly fee for unlimited access to content (e.g. Netflix; Amazon Instant Video).

Time-shifting
The recording of a programme to watch at a later date, the pausing of live TV, or the use of catch-up services provided by VOD. Can also refer to programmes recorded on VCRs, but has become more prevalent with the advent of PVR/ DVRs. Can also be used to describe '+1' channels, which broadcast exactly the same content as the original channel but one hour later.

VOSDAL: Viewing on same day as live
Watching a TV show through time shifting or a VOD service on the same day that it was broadcast (but not live).

Smart TV
A TV set with in-built internet functionality. Users connect a broadband router directly into the TV.
Internet-enabled TV
Any TV set connected to the internet via a third party device, such as a set-top box, games console or laptop/ PC.

Ipsos. "There will be a tipping point at some stage where the technology and the recruitment allows us to effectively measure as much activity as possible passively, but what we still need to understand is the motivation for choosing that programme, brand, product or service. The danger is that with all the big databases you're just looking at response. But without thinking about the motivations of that response, you get nowhere."

Martin Greenbank, head of advertising research and development at Channel 4, believes that Barb's 'traditional', representative sample approach is vital to anchor findings from big data. "It [Barb] is the first port of call for all broadcasters, representing a macro picture of UK viewing," he says. "Of course for a channel like London Live – for whom two Barb respondents watching represents a good audience – it's a little different. You don't get the level of granularity you might need. But if you just look at big data, it's skewed. It's not representative."

Greenbank believes that the future of media research lies in a fusion of representative samples and big data.

Barb, through its latest undertaking – Project Dovetail – is currently developing the ability to harness device-based data with a view to achieving this mix of big data and context. The first stage of this is its work alongside broadcasters to embed an SDK (software development kit) plugin into all VOD apps that collect information on what is being watched. "This will give us, not just within our panel, but every time anyone requests content, a very precise measurement of the devices: the number of devices that have requested a particular programme and how long they've watched that programme for," says Sampson. "It's effectively a census level count."

Barb is also looking into the possibility of incorporating return path data from PVRs into its dataset.

In each of the homes on Barb's panel, the viewing data on devices – including set-top boxes, games consoles, laptop and desktop computers – will also be tracked, covering around 30,000 devices in total. The intention, says Justin Sampson, is to fuse this data with the data collected through its peoplemeters. In order for this data to incorporate the context lacking in other 'big data' approaches, Barb is trialling, in partnership with Ipsos MORI, a tablet peoplemeter. Alongside recording panellists' presence in the room, the tablet uses a combination of audio watermarking and fingerprinting (watermarking is used to identify broadcaster content; fingerprinting is used to discriminate between different content use cases, for greater accuracy) to establish what is being watched in that room – on any device.

The future?

There are still drawbacks to this: passive measurement can only capture an individual's presence in the vicinity of an audio signal; it cannot offer any information on how intently, if at all, that person is watching the broadcast.

With this in mind, Thinkbox is continuing its exploration of TV viewing by adopting a CCTV approach: setting up multiple cameras in lounges, as well as HD glasses that respondents wear and go about their everyday business. They've also enlisted the help of an anthropologist – to observe and interpret this behaviour – and a memory expert, who will investigate how audio could play a more significant role in message delivery, given the amount of visual stimulation that comes from multi-screening behaviour.

And while in theory media researchers could capture this information, many believe it may just be a step too far, especially when working within the confines of data privacy. "The technology is out there to capture the multimedia world: you've got Google Glass, you've got GPS devices, you've got scanning devices," says Ford. "I often use the example that you could put a helmet on someone with a camera and a GPS device and a barcode scanner and you could capture everything that they ever do. But no one's going to do that."

> "If managers simply ask whether the score went up or down, the tracker may not be doing the right job"

What's more, not all advertising is geared up to generate an instant sales response. Some products are promoted in a way that attempts to build a relationship with potential customers, so that when they do come to make a purchase, that brand will be front of mind. The impact of this kind of advertising, says Ipsos' Shaw, can only really be accessed through that often forgotten research approach: asking questions.

"The overarching trend is moving toward behavioural metrics and proven behaviours, and I guess that's because of digital and because the technology allows you to do that," says Shaw. "But as much as you can look at sales, there's a lot of brand-building – perhaps for a car that someone might not buy for two years. Brands want to form an impression in customers' minds for when they get to that purchase. And if you want to know if you're starting to move people you have to ask them their opinion."