Measurement matters: difficulties in defining and measuring children's television viewing in changing media landscape

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Abstract

Audience measurement techniques currently fail to provide a clear picture of trends in children's television viewing because of the diversification in devices on which television content can be viewed. It is argued that understanding how children engage with television content is undermined by commonplace but problematic comparisons of time spent on television viewing and on internet use, in which it is widely believed that children are deserting 'television' for 'the internet'. Although it is already well known that television content can be viewed on internet-enabled devices such as tablets, smart phones and laptop computers while internet content and services can be accessed via internet-enabled television sets, such viewing cannot be measured satisfactorily at present. While no doubt measurement techniques will continue to improve in accuracy, this article suggests that such measurement difficulties matter at a time when children's public service broadcasting provision is falling and further threatened.

> "Children spending more time online than watching TV for the first time" (Jasper Jackson, *The Guardian*, 26/1/16)
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> "Children spending less time in front of the TV as they turn to online media" (Jasper Jackson, *The Guardian*, 6/8/15)

Three main organisations collect data on children's media use in the UK – Childwise (a private market research company), Ofcom (the Office of Communications, the statutory communications regulator) and the official industry body, BARB (the British Audience Research Board). The first of these Guardian stories reports Childwise data for 5-15 year olds, the second reports Ofcom's data for 8-15 year olds. Both give the clear impression that time spent online is displacing time spent watching television. Yet half way down the page, the first story observes that:

> "The research, which is based on an online survey of more than 2,000 children, did not distinguish between TV-like services on the internet, such as Netflix and iPlayer, and other forms of browsing such as Facebook, meaning it is unclear whether children are merely watching shows in different ways."

The BBC's reporting of the same study is also problematic ("Time spent online 'overtakes TV' among youngsters"; Coughlan, 2016) in describing the key finding as a "switch away from television" yet noting that YouTube is the "dominant destination" for 5-16 year olds accessing the internet and that "YouTube is also a popular way of watching television programmes."

Why does this matter? One answer is that it matters for understanding, descriptively, how children engage with television content. Even naming the ways that children engage with television content has become confused. For example, the 2016 Guardian story refers to 'time on the internet' compared with time 'in front of the TV,' obscuring the degree (as yet unmeasured) to which children now watch television content on a computer, tablet or smartphone. The 2015 story strives for accuracy through a mix of terms - time spent "in front of the TV" or watching "TV at the time it is broadcast" or "daily time in front of the box." Yet the same story resorts to a simple summary of the statistics as showing that "time spent watching TV has fallen each year since 2010." This slippage is also evidence in Ofcom reports, moving between careful claims about "viewing TV on a TV set" or "watching measured TV" to "viewing TV" or "weekly reach" or and, thereby, if not enabling at least not preventing the inference (as exemplified by the headlines quoted at the start of this article) that a decline in the former represents also a decline in viewing overall.

A second answer is that it matters normatively, in advocating for how television content could or should be provided for children. In the second story, James Thickett, Head of Research at Ofcom, is quoted as commenting on the notable reduction in original (not

repeated) children's broadcasting that "what we've seen over the last 10 years is that only the BBC is commissioning UK original content." The conclusion of Lord Puttnam's 2016 inquiry into the 'Future of TV' is pessimistic:

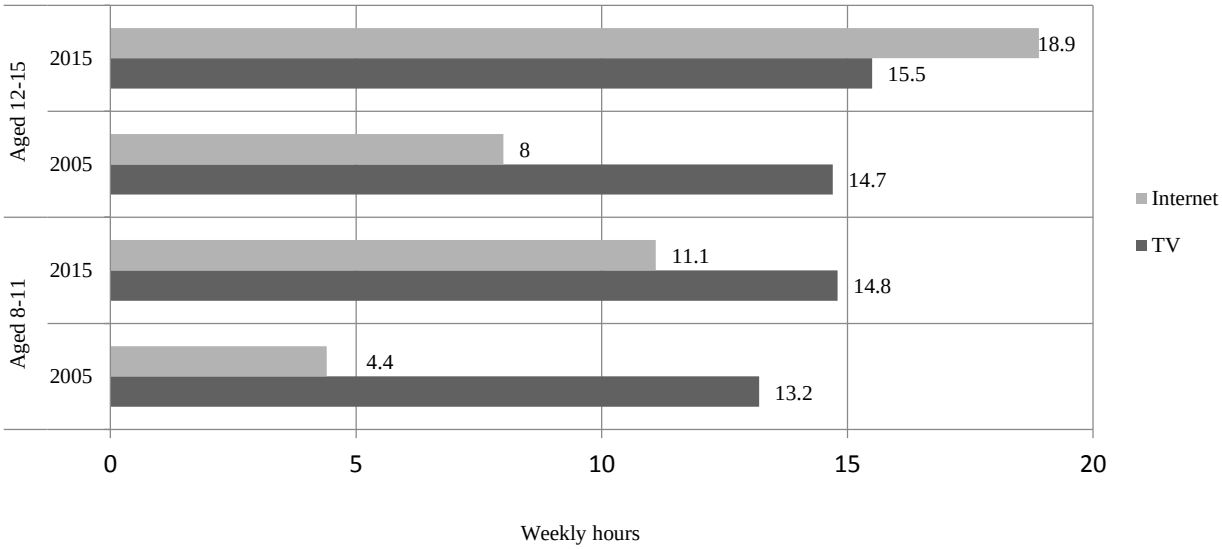
> "While there is no shortage of children's audio visual content overall, there is an alarming reduction in commissioning and spend on children's television on the main public service channels [resulting in …] a serious fall in investment in children's TV amongst commercial public service providers with a drop of 20% in spending between 2008 and 2014. This has been accompanied by a 51% fall in consumption of children's TV on the public service channels in contrast to only a 5% fall across the whole of television since 2003." (Goldsmiths College, 2016: 137)

In other words, measures of a declining child audience are commonly linked to the decline in funding for public service broadcasting (PSB) for child audiences (Ofcom, 2016. This applies particularly to the UK's so-called 'commercial public service broadcasters' (broadcasters with legal public service obligations while funded by advertising revenue). These latter have variously found ways over the past decade to reduce or evade their public service (or, arguably, any) obligations to children: this is especially the case for two major players, ITV and Channel 4, while Channel 5 now provides just for two to seven year olds. However, although the BBC (a broadcaster with legal public service obligations funded by a licence fee) is left as "virtually the sole commissioner of UK-originated children's television content" (Steemers, 2016: 7), measures showing a declining television audience also matter to the BBC as public and political legitimation for the licence fee relies heavily on maintaining high audience ratings (Lunt and Livingstone, 2012; Napoli, 2011).

A closer look at the statistics

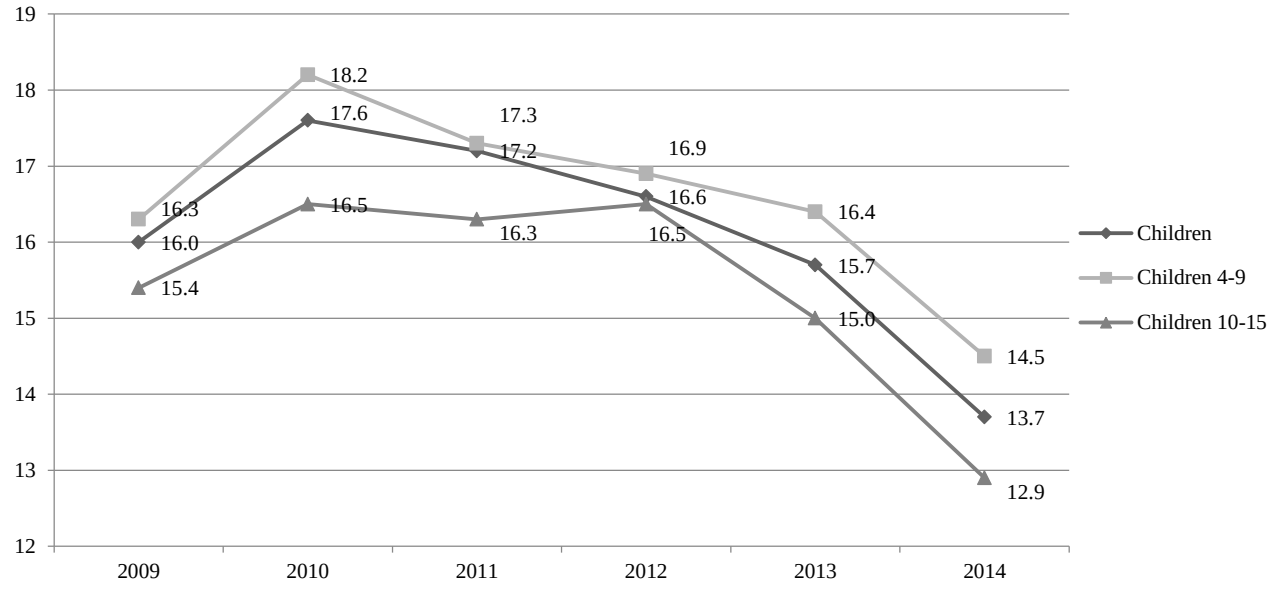
Defining "watching TV" as watching television *exclusively on a television set*, Ofcom's (2015: 22-23) self-report data (Figure 1) shows that television viewing is holding fairly steady across all age groups. With 2015 figures actually a little higher than those for 2005, it seems that, contrary to the headlines, children are hardly watching less television than before. However, it does appear that the overall amount of time children are spending with media is increasing because of widespread access to the internet, and thus media consumption devoted to watching television (on a television set) is declining in proportional but not absolute terms. (In this context it is curious that the "Future of TV" report seeking to advocate for children's PSB focuses more on proportions than absolute time spent (Goldsmiths College, 2016)).

Figure 1: Estimated weekly hours of media consumption at home or elsewhere
Source: Ofcom (2015)



However, Figure 1 is based on children's self-reported viewing in answer to the question, "How many hours would you say you spend watching TV programmes on a TV set" (with a prompt to the interviewer to exclude DVDs or games accessed through the TV set). Whether children understood to exclude television content viewed on other digital devices or other contents viewed on the TV set is unknown. Lower figures, especially for 10-15 year olds, were also reported by Ofcom in the report annex. Now based on BARB data, Figure 2 shows a year-on-year decline in watching "broadcast television" at home, measured as viewing live (i.e. at the time of broadcast) or time-shifted on a television set (or on other devices connected to a television set) but excluding time spent watching television content on other devices (such as iPlayer on a tablet) (although BARB is now experimenting with software meters in its panel homes under the name "Project Dovetail").

Figure 2: Average hours of weekly broadcast television viewing, by age (hours, mins)
Source: BARB, 2009 – 2014 (Ofcom, 2015)



While we have hardly reached the end of "watching live broadcast terrestrial television programmes on a television set", children's viewing is clearly changing with the advent of mass internet use. Childwise's research director, Simon Leggett, is well aware that the measures are no longer fit for purpose, saying in the 2016 Guardian story:

> "TV viewing has been redefined … Children are now seeking out the content of their choice. They still find traditional TV programmes engaging but are increasingly watching them online and on-demand or binge watching box sets."

This seems to capture the heart of the problem. 'The media' are, in Roger Silverstone's (1994) terms, "doubly articulated", combining the symbolic (content) and material (devices) in ways that are, now, diverging and converging in new permutations in "the digital age". In this context, it is unhelpful that the available measurement tools are largely tied to *devices*, leaving it difficult to track time spent with the *content* that is, after all, the primary focus of contestation, especially in relation to children's engagement with public service broadcasting. Tempting though it is to (mis)quote Disraeli's "lies, damned lies and statistics", we do not contend that the resulting confusions on the part of public, policy and media observers are the result of deliberate manipulations. Rather, they are proving remarkably hard to resolve precisely because technology is changing faster than audience measurement techniques can keep up, because in relation to online activities, such platform usage data as exists is often proprietary and not in the public domain, and because children's social practices of media use easily fall 'under the radar' of statistical scrutiny (Ang, 1991), since young children find it difficult to report on time use and parents have only partial knowledge of their children's activities.

Given present limitations, learning from the currently available statistics requires some care. In a context when overall time spent with media is rising, it appears to be *both* the case that children are shifting their interest from the television set to other devices and from television content to other content *and* that time spent with television sets and television content is not falling (or not falling much). We say here 'appears to be' the case because no definitive measure exists for the time children spend watching television on devices other than a television set, much less what they watch in terms of content, public service or otherwise. Nor can current measures record how many of the hours spent 'using the internet' include viewing television content (e.g. on YouTube). Thus the relation between time spent watching television on a television set and on an internet-enabled device, and between time spent on television content and other online content remains unknown.

We do have some hints to go on, in support of the above *both/and* claim:

- Ofcom's children's (self-report) survey in 2015, using the measure quoted above, showed that 96% of UK children aged 5-15 (still) use a television set to watch television (any channel), while 45% of 5-15 year olds also say they view television on other devices (though exactly what this means – content made for television broadcast, YouTube original content, or 'television-like' content – is unknown).

- Ofcom's (2014) time-use diary study with 359 children found that over half (64% for 6-11s and 52% for 11-15s) of *time spent* on 'watching activities' was spent on of 'live' television, the rest being viewed via streaming, on demand, recorded and short clips. This suggests that a fair amount of television viewing takes place on other devices in ways not (yet) measured by viewing statistics.

- Now measuring the percentage of 7-16 year olds who do the activity *at all*, Childwise (2016) reports a *decline* in "terrestrial TV viewing" from 2010-2014 for all the main channels except ITV. Meanwhile, while "watching TV and video on websites like YouTube" has held *steady* from 2011-14 (at around 50% of 5-16 year olds), and "using paid for on demand e.g. Netflix" shows a sharp *rise* in viewing. This suggests a more direct displacement from free-to-air to paid-for and from scheduled to on-demand viewing (but not necessarily, an overall decline in watching television of any kind).

- Last, Ofcom (2015: Figure A1.5) reports BARB data on children's (4-15 years) "proportion of weekly viewing (%)" of "children's airtime" (measured on a television set and including content via other devices connected to the television). This shows fairly steady viewing from 2009-2014 of commercial non-public service broadcaster channels (at relatively high levels - 66% to 67%), steady viewing (at very low levels - 3% to 4%) for ITV, Channel 4 and Channel 5 (the three 'commercial public service broadcasters' that have reduced children's programming) and a small increase (25% to 29%) in BBC's children's channels (CBBC and CBeebies). Overall, it seems that

despite the increase in commercial services targeting children, there is little displacement of children's interest in PSB.

Why do definitions and measures matter?

So far, we have demonstrated that, while undoubtedly children are increasingly consuming audio-visual content through a variety of devices and platforms, the available data are insufficient for strong claims about children's changing media practices. Viewing live broadcast television on a television set remains popular across the age span, while viewing television content on other platforms appears to be growing in popularity. Despite this changing context, it also seems that PSB is not losing its child audience although no measurement as yet combines figures for a particular programme viewed live, time-shifted, downloaded, on YouTube or Netflix or Facebook or on the CBBC website, etc. Put simply, we no longer know how many children watch *Postman Pat* or *Tracy Beaker*, because children's often enthusiastic viewing of television content on new platforms or devices is rendered largely invisible by present measurement technologies. As Barwise and Picard (2012: 38) observe, on the internet:

> "There is no clear-cut technical distinction between TV content and other video content – YouTube clips, videos embedded in newspaper sites and company websites, etc. Content can be sliced and diced, combined with other content, supplemented with additional content at the click of a button, shared between consumers in different places, and bought and sold in any convenient way."

While content is increasingly available across a widening array of devices and services, this is not to say that devices no longer matter. Devices are materially located in homes or elsewhere, and they afford distinct social arrangements. Arguably three issues are at stake, all of them concerned with the child's lifeworld:

- Equity – while upwards of 95% of children have a television set at home, figures for internet access are still lower, although the gap is closing, especially for older children (Ofcom, 2015). The percentage of children excluded from the television audience (and the shared symbolic world this affords) is hard to assess because surveys of viewership tend to exclude those who are also socio-economically marginalised (looked after children, homeless families, the poorest households). Still, it seems likely that television remains more accessible to more children than is the internet.

- Sociability – the television set in the living room is still a key device for shared family viewing, potentially supporting positive family dynamic, and the shared conversations that enable media literacy (Lemish, 2007). Of course, family dynamics change as television sets multiply in the home and media may trigger tensions as much as conviviality. Still, parents have not yet found ways of sharing small or personalised screens as well as they have the main family television set.

- Parental regulation – parental mediation of children's media use is still easier for television than for internet-related media, because there is a longer history of available parental tools for television, including the 'watershed' (Valkenburg, 2004), because parents can draw on established social norms (and a longer history of personal familiarity) to manage television use than the internet, about which many parents are anxious (Blum-Ross & Livingstone, 2016).

For these reasons, it is meaningful to measure and discuss the use of *devices*. But this is a poor way of measuring and discussing use of *content* in the digital age. Content is always hosted on and distributed via a platform, and while platforms are ever less tied to specific devices, they are themselves fast becoming the new intermediaries - as businesses (brands and sources of revenue), as subjects of regulation and as the locus of everyday social practices (van Dijck, 2013). The main platforms for watching television include broadcasting (live or as live, and offered in the UK by via Freeview, Sky, BT, Virgin and others), online on demand services such as the BBC's iPlayer as well as the open internet.

Distinguishing platforms matters for debates over, for instance, the visibility of public service media in the electronic programme guide or other content gateways (BBC, 2015), or the "must carry" rules that require commercial services to include PSB channels, or the rules for advertising and other potentially-harmful content. As revealed in current debates over proposed revisions to the EU Directive on Audiovisual Media Services (Macenaite, 2016), which seek in some respects to extend content regulation to the open internet, platforms are proving especially controversial in relation to privacy and content regulation, long fought for by child welfare advocates in relation to television (consider, for example, US regulatory battles over YouTube Kids; Kasser & Linn, 2016).

In the UK currently, the BBC is the only PSB to have an online platform dedicated to children's content that neither collects their personal data nor carries commercial sponsorship or advertising. For children, therefore, options for viewing or engaging with non-commercial public service media are limited (House of Lords, 2015). This matters both because of the adverse effects of exposure to advertising (see Bailey, 2011; Calvert, 2008; and Valkenburg, 2004), and because commercial broadcasters tend to omit a range of content categories of value to children (such as news or UK-originated drama; Ofcom, 2007; House of Lords, 2015; Davies & Thornham, 2007).

Notably, it is the open internet that is now home to the newly dominant platforms important in children's lives – with YouTube and the BBC leading, and Netflix rising fast in popularity (along with a series of gaming, streaming and other child-targeted sites, such as Twitch; Childwise, 2016). While these escape the content regulation (except in relation to illegal content), they are subject to data protection regulation (Macenaite, 2016; Montgomery and Chester, 2015); but beyond this, regulatory norms around content derive from the institutional provider (in the case of the BBC), the country of origin (notably, the US's Child Online Privacy Protection Act in the case of YouTube), trade association membership (e.g. international codes of advertising practice) or industry self-regulation.

As is already apparent, while content is provided via platforms, this is produced and distributed by *services* (whether a PSB or commercial producer, of UK or US or other origin), bringing, a further set of issues into view. These centre on questions of value – economic value for the provider, cultural value to children (and, arguably, to the wider society). However, online, we know little or nothing of which services (and thus which kinds of content) children engage with, at least in terms of publicly available and reliable data.

Ofcom reports annually on comScore's data on the "top 50 web entities accessed by children aged 6-14 from desktop and laptop computers" (2015: 224). For example, the top twenty web entities accessed by children in 2015 were, in rank order: 1. Google, 2. MSN, 3. BBC, 4. YouTube.com, 5. Facebook and Messenger, 6. Yahoo, 7. Amazon, 8. Wikipedia.org, 9. Windows Live, 10. Roblox.com, 11. Mode Tend Parenting, 12. O.UK, 13. eBay Sites, 14. Disney Entertainment, 15. Microsoft, 16. Steam (App), 17. Safesearch.net, 18. Origin, 19. Animaljam.com, 20. Adobe.com. This list is problematic insofar as the data excludes content accessed via tablets, smartphones and other devices. The notion of 'web entity' is also problematic, as this includes entities which are not updated with content such as Microsoft, or websites for downloading apps.

Still, the list reveals that children are accessing considerable amounts of commercial (and probably international/US) content, much of it designed for a general (adult) audience, although it is hard to tell much about children's interest in public service or commercial content, child-appropriate or generalist content, or anything about content genres. So, while there are growing industry efforts to measure children's access to different platforms, including online platforms ('web entities'), it is difficult to use such data to inform trends on relation to content or consequences of viewing. Despite the growing importance of children's online activities, no organisation appears to be charged with measuring the use or evaluating the associated harms or benefits in a manner that is publicly available and accountable.

Last, we observe that the category of *public service media* is expanding beyond television, film and radio to include an expanding set of public service media outputs (consider, for instance, children's content produced by art galleries, science museums, libraries, universities and other public bodies). It also includes the non-broadcasting services provided by public sector broadcasting organisations. But in the digital age, these may be increasingly important beyond supplementary marketing tools, although we know little about how much time children spend on them or what benefit they gain from engaging with the information, games, links and other resources beyond programme content on, for instance, the BBC Children's website (BBC, 2016).

If children are to find public service television and other public service content online, given the increasing complexity of platforms and commercial offers, the challenge of 'discoverability' must be met with their needs foremost. PSBs have traditionally played a valuable role in exposing their audience to mixed diet schedules, thereby encouraging viewers to watch programmes on subject matter that they may not seek out unprompted but

may yet enjoy. A concern with children locating content through search engines or YouTube is that these 'mainstream' as many people as possible towards highly ranked sites (or to other sites like those the child has already visited). Currently, many sites are designed to be 'sticky,' precisely not to open up new pathways of exploration and interest-led learning (Ito et al., 2015), while search tools generally direct users to 'more of the same'. Such characteristics of the online environment are likely to continue and become yet more canny, working in the commercial interest and, inadvertently or not, undermining children's ability to discover public service content online and, therefore, undermining the sustainability and scalability of new public service providers. It is understandable, but not helpful, in this context that 41% of 12-15s and 63% of 8-11s only use sites and apps they have visited before (Ofcom, 2015: 86), partly because, for safety reasons, their parents and teachers do not encourage wide or experimental searching online.

Conclusions

In a politically contested terrain such as that of provision for public service broadcasting in a competitive market economy, the story told by audience measurement can have significant consequences in terms of the availability of public and commercial investment for the key players (Born, 2004; Bourdon and Meadel, 2011). While the UK has seen a long history of political, economic and regulatory pressures on public service broadcasting provision for children that predates the internet (Blumler, 1992; Davies and Thornham, 2007; Livingstone, 2008), this article contends that present difficulty of measuring audiences in a time of rapidly-transforming technological and social practices (Buzzard, 2012) is adding to the difficulties of those (academics, practitioners, policy-makers) now seeking to defend such provision.

To understand children's engagement with television content in a changing media landscape, and to grasp the significance of PSB within this, we have called for measures that capture content viewed across devices, platforms and services – ideally, broken down by demographic categories. Only then can we answer the question, are children moving away from television content, including public service broadcasting, to online contents and, assuming they are, where are they going? Such questions cannot be answered by comparing statistics that simply compare time spent on 'television' or 'internet' without recognising that devices no longer map neatly onto platforms or content. Thus it is imperative to generate more and better research on children's consumption of content so that we are able to understand the role of public service media for children today, anticipate future trends and, importantly, seek to shape these in children's best interests.

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