Confusions and Delusions about "Non-Linear TV" and Why They Matter

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Among all the excitements about how media are changing, one of the most widespread is the supposed imminent transition from so-called "linear" to "non-linear" television.

I'm not here referring to the idea that people are increasingly watching various types of video on demand, or "VOD": that's obviously true, if often exaggerated. What I'm talking about is the suggestion that, in the next few years, *the main way people watch television* will change from (quotes) linear to (quotes) non-linear.

For instance, last year's Digital Britain report referred to the *"not-distant point"* when people switch from mostly passive viewing from the linear schedule to active consumption using search and on-demand.

I believe most of this talk is both confused and deluded. It's *confused* because "non-linear TV" is hardly ever defined and is used to mean very different things. And it's *deluded* because the extent of change in what and how people watch TV has been - and, in my view, will continue to be - much less than the current hype suggests. In the main part of this talk, which I'll call *Waiting for Vodot*, I'll explain what I mean and outline the evidence behind it.

I'll then tell you *why, in my view, these confusions and delusions matter*, through their impact not only on companies' investment decisions – which are their own business – but also on the way public policy is evolving. In particular, I believe that the hype about "non-linear TV" is one of the main drivers of the previous and current governments' *over*-emphasis on superfast broadband and *under*-emphasis on both digital inclusion and on maintaining a strong and independent BBC.

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Finally, Jocelyn has asked me to say a few words on the recent BBC licence fee settlement.

First then, *Waiting for Vodot*: why do I think the vision of an imminent transition to predominantly non-linear, on-demand viewing is based on confusions and delusions?

What I mean by “Vodot” is very specific: that is, *large-scale, commercially viable, standalone VOD*.

A Vodot company would create or acquire TV content; market it; distribute it on-demand through the internet to consumers’ TVs and other devices; and generate more revenue than its costs, from advertising, subscriptions, and pay per view.

I’d like to stress two things about the way I’ve defined Vodot.

First, it includes the words *large-scale*, by which I mean significant relative to the level of TV viewing. Remember, Digital Britain referred to people *switching* from mostly passive viewing from the linear schedule to active consumption using search and on-demand. In other words, the delusion I’m addressing is the belief that *mainstream TV viewing* is undergoing revolutionary change.

VOD isn’t just a fad. I have no doubt that in 2020 people will still be exchanging short video clips, probably even more than today. I also expect the video retail and rental market to switch from physical DVDs to online delivery. But both of these will still be *peripheral to people’s mainstream TV viewing*. They’re not revolutionary and don’t fall under my definition of Vodot.

The other word I’d stress in that definition is *standalone*. It may make good commercial sense for Apple, Sony, Sky, Virgin Media, BT, Nintendo, Microsoft or Google to include VOD in their product offerings if it helps them increase the revenues and profits of their main business. In fact, I have no doubt that this will continue.

For these companies, it doesn’t matter if VOD generates less revenue than its costs. But for the revolution that Digital Britain and others envisage, large-scale VOD has to be commercially viable in its own right. That's why my definition of Vodot includes the word standalone.

In Waiting for Godot, Godot never appears. In Waiting for Vodot, we're still waiting. *Will Vodot finally appear?* I say no, but many would disagree.

We'll soon know who's right. Most homes now have broadband; VOD is increasingly getting onto the main TV screen; and people in several countries are testing a wide range of technical and business models. The jury's still out, but we should have a verdict by the end of next year or soon after that.

If, as I believe, the VOD bubble is about to burst, that doesn't mean VOD will disappear, any more than the internet disappeared after the technology bubble burst in 2000. As I've said, big technology and media players will still provide VOD alongside their main products and services to increase customer acquisition, retention, and willingness to pay – but not as a big direct revenue or profit source.

There will also be niche services replacing DVD retail and rental services.

But what we won't have any time soon – or maybe ever – is Vodot as I've defined it or the death of so-called 'linear TV', which the digerati have been predicting for so long.

In 1990, George Gilder wrote: *"Television is a tool of tyrants. Its overthrow is at hand"*. He also predicted a *new golden age for newspapers thanks to online*, which should tell you how much to believe his pronouncements.

In 1995, Nicholas Negroponte, head of the MIT Media Lab, wrote, *"What will happen to broadcast television over the next five years* [that's 1995 to 2000] *is so phenomenal that it's difficult to comprehend"*. Nothing much happened.

Part of this 1990s vision was that *TV viewing would itself involve a lot of interaction*. You'd be able to watch the match from any seat in the stadium, click on the screen to buy Jennifer Aniston's t-shirt during

Friends, or call up a potted history of Estonia when its prime minister was on the news.

The distinction between TV and other video content would disappear. Most viewing would be non-live – what the technologists call asynchronous. Most content choice would use search and recommendation agents.

All of this was supposed to be commonplace by the early 2000s and certainly well before 2010.

After the bubble burst in 2000, most people accepted that the interactive bit of this vision – Jennifer Aniston's t-shirt and all that – was nonsense. But as recently as 2006, Janus Friis, the co-founder of Kazaa and Skype, and then about to launch the ill-fated VOD site Joost, said:

"People love TV, but they also hate TV. They love the … amazing storytelling, the richness, the quality itself. But they hate the linearness, the lack of choice, the lack of basic things like being able to search. And wholly missing is everything that we are now accustomed to from the Internet: tagging, recommendations, choice, and so on".

The idea that we're going through revolutionary change in TV viewing is remarkably persistent.

Last year, the *Guardian*'s Emily Bell wrote that, *"Within two years, audience behaviour has completely changed due to the availability of broadband and the penetration of the internet".*

Also last year, I was told by a senior independent producer that, *"In five years' time, TV channels may no longer exist"*.

The Digital Britain report, which I've already quoted, was also last year and VOD again features in the new government's discussion of superfast broadband, as I'll discuss.

Once you've heard the facts I'm about to present, you can decide for yourselves how likely it is that Vodot is finally about to appear, as all these statements suggest. My own view is that, even if we soon have near-universal broadband access, the switch from live to on-demand mainstream viewing, if it *ever* happens, will be well past the year 2020.

How can I be so sure?

First, most of what's actually happening is evolutionary not revolutionary and there's no good reason to believe that will change.

Let's clarify what we mean by non-linear. In the new TV environment, we can distinguish between four broad types of viewing. Given the amount of confusion and the loose way in which people talk about linear and non-linear TV, these distinctions are important.

There's *live viewing of regular TV.*

There's *time-shifted viewing off the PVR* or something similar.

There's *catch-up TV* like the BBC i-Player, which is also time-shifted but doesn't require you to preset the recording.

All three of these are evolutionary. They're *all* about watching regular linear TV from the regular linear schedule, either live or time-shifted. Far from heralding the death of linear TV channels, they all depend on those channels for content.

Only the fourth type of viewing - *true video on demand* – breaks away from the linear schedule. The content here is a mixture of *long-form movies and TV programmes* (competing against DVD retail and rental and some pay TV channels) and *short-form video clips* on sites such as YouTube.

What's happening in homes that have the new technologies? It's still early days and there's a lot of individual variation within and between homes. But if you look at *proper data on typical viewers*, a consistent picture emerges.

If people have lots of channels, a PVR, and VOD, the first thing most of them do if they want to watch TV is still to see *what's on live on* *their favourite channels*. Live TV still accounts for 80% of viewing in these homes and that percentage is rising slowly, if at all.

What about the other 20%? In the past, if there was nothing they liked on any of their favourite channels, viewers had four options: watch the “least bad” programme on one of those channels; search the other channels for something better; watch a video cassette or DVD; or switch off the TV. They usually did the first – watch the least bad programme on one of their favourite channels – partly because it required the least effort.

Now, they no longer have to do this. There’s *always* something good, which they themselves have chosen, easily available on the PVR. *For most viewers, the PVR is the main backup to live TV, accounting for over half of the 20% non-live viewing in well-equipped homes.*

There’s also catch-up TV for when you forgot to set the PVR or heard about the programme the next day. But that’s just a different type of time-shifting and it too is either free or bundled into a platform offer.

The fourth category - true VOD - is still tiny as a proportion of total viewing time**,** still less than 1% among the whole population, maybe 2% for 15-34s. It will increase over time, but much more slowly than the hype suggests, and viewers’ *willingness to pay* for it is very limited, even assuming there’s little or no piracy – a necessary assumption for viable Vodot based on subscriptions or pay per view.

Having *VOD on the main TV* instead of a laptop or PC will help. But the initial evidence – including Virgin Media’s continuing coyness about the percentage of true on-demand viewing in Virgin homes with PVRs – suggests that the benefit isn’t that dramatic.

The second reason for scepticism about the death of linear TV is that surveys of *why* people watch online TV show that the main reasons are to *watch recent TV programmes which they missed*, to *watch a TV programme or movie a second time,* and to *view something for free* rather than paying. All of these are still about traditional linear content.

Less important reasons for watching online TV are to *see content that's not available on TV*, to *keep informed during a breaking news story*, and to see *additional content about a programme*. Even these are often driven by or derived from linear TV.

Third, *the PVR is a ferocious competitor to VOD*. PVR penetration is still much lower than broadband penetration. As that gap decreases, and as PVRs get bigger and smarter, more homes will have their own, increasingly large, self-selected archives, reducing the value of both catch-up and on-demand TV. Note that the PVR – the main backup to live TV – relies entirely on regular TV programmes from the linear schedule and doesn't even need a broadband connection.

Fourth, catch-up TV is another tough, free competitor to VOD. Catch-up TV does need broadband, but it's still about regular linear TV content and channels. It's not VOD.

Fifth, compared with broadcasting, the internet is still an unreliable, poor quality, and expensive video channel. To replace broadcasting – that's *4-5 hours per home per day of, increasingly, HD-quality video* – the technology will need to mature and either viewers or advertisers will have to pay the internet service providers the extra bandwidth costs. Neither seems keen to do so.

Sixth, many people still don't use the internet at all, mostly heavy TV viewers living in areas *with* broadband access. By 2020, I expect this to be only a small minority, but many homes still won't have adopted broadband and internet-enabled TV sets.

The final reason for my scepticism about VOD is that live and time-shifted linear TV are so compelling, and becoming more so.

For over 40 years, viewers have watched an average of ***over three and a half hours of TV a day*** - a mixture of drama, comedy, news, sport, documentaries, and general entertainment - mostly to relax, in the evening, in the living room, with other family members.

How much, what, when, where, with whom, and even how people watch TV has changed surprisingly little since the 1960s.

Oddly enough, we don't really know *why* people watch so much. Maybe the neuroscientists will give us an explanation. My hunch is that watching TV takes up enough mental capacity to take one's mind off other things, but not enough to take serious effort. We watch TV to take our minds off what we're *not* doing – work and chores. In contrast, we mostly listen to the radio to take our minds off what we *are* doing – driving, cooking, ironing, and so on.

Another reason for the average six hours a day people spend watching and listening is that broadcasting is such good value for money. Telecoms and the internet cost consumers more than a pound per consumer hour. Television costs about 11p, radio a bit over 1p.

Whatever the reasons why we watch so much TV, it seems to work.

Further, despite the growth of new media, TV viewing has actually *increased* in the last few years. Some of that is down to people spending less on out-of-home entertainment during the recession. But interestingly, all the growth has been on *main sets in living rooms*: watching the main set is more compelling than ever because of bigger and better screens, PVRs, and so on.

[The new definition of working class is having a screen too big for the living room].

Put simply, this is a very well served market. I simply don't see standalone VOD services adding enough value to enough consumers to cover the substantial costs of content, marketing and distribution any time soon, except at the margin as a replacement for DVDs. We've waited a long time for Vodot. I don't think he's about to appear.

To recap:

- Despite the hype, most of what's actually happening is evolutionary not revolutionary. Even in homes with all the latest equipment and services, 80% of viewing is still live and most of the other 20% is time-shifted viewing of regular TV using a PVR or catch-up service. VOD, including short video clips as well as

movies and TV on demand, is still tiny as a proportion of TV viewing.
- When people do watch TV on demand, it's mostly to see a regular programme they missed, or to see it again, or to see it for free.
- The PVR is a ferocious competitor to VOD, and becoming even more so.
- Catch-up TV is another tough competitor.
- As a physical channel, the internet is less reliable, lower quality and more expensive than broadcasting
- Many people still don't use the internet and, even in 2020, many won't have adopted broadband and internet-enabled TV sets
- Finally, this is an extremely and increasingly well-served market which represents extraordinary value for money.

As I've said, I expect VOD to keep growing in various forms as an *adjunct* to mainstream TV and as a *marketing tool* for big technology and media companies that make their money in other ways.

What I don't expect is what Digital Britain and others are predicting: an imminent switch from mostly passive viewing from the linear schedule to active consumption using search and on-demand. I hope I've convinced you that these predictions are both confused and deluded.

That brings me to my secondary theme, *why, in my view, these confusions and delusions matter*.

At one level, they matter because a lot of companies are investing on the assumption that the on-demand TV revolution is about to happen and represents a big commercial opportunity. In my view, most of these investments will end in tears, although, as I've said, I think there are two types of exception: niche services replacing DVD retail and rental, and big companies using VOD to sell other products and services.

What I think will *fail* is any investment that assumes that the revolution in mainstream TV viewing envisaged in the Digital Britain report will really happen over the next few years.

However, no-one, including me, knows exactly how viewers will respond to the numerous VOD products and services coming onto the market. *Companies* will make their own decisions. Those that disagree with me about this should back their hunches – although they may want to think about the points I've made.

But the confusions and delusions about so-called "non-linear TV" are also impacting *public* policy in ways that are, in my view, potentially damaging to viewers, listeners, taxpayers and the socially and digitally excluded.

Politics is about making tough choices, especially about priorities. Right now, with the public finances under such extreme pressure, expenditure priorities should be debated and justified even more rigorously than usual.

In the case of the Government's policies for superfast broadband, digital inclusion, and the BBC, that doesn't seem to be happening yet.

So far, there's been minimal opportunity for public and parliamentary scrutiny of these policies. The speed of decision-making, the proposal to strip Ofcom of its policy advice role at the same time as the deep cuts at DCMS, and the failure so far to engage in serious discussion about the costs and benefits of alternative options are not encouraging signs.

On the other hand, it's still very early days and the need to reduce the budget deficit inevitably means some rough and ready decision-making. What matters is whether ministers can switch to a more open and evidence-based approach once the dust from the cuts has settled.

Leaving aside the question of whether the Government is right to raid the BBC licence fee on such a big scale, there's certainly a case for some public investment to help drive the internet economy beyond what the market will provide. There are three main options for this and we should probably do some combination of all three:

- *Driving superfast broadband access* further and faster than the, say, 60% of homes that BT and Virgin say will have potential access to it in the next 5-6 years without government subsidy
- Providing *near-universal access* to always-on broadband at 2 megabits per second.
- *Digital inclusion* - encouraging and helping to go online more of the 9 million, mostly poor and elderly, UK adults who never use the internet. Probably a majority of these are in areas where broadband is already available and, for many, affordable.

The initial signs are that the Government is making the first of these – superfast broadband – the overriding priority, with the second – near-universal access to 2 megabits per second – the second priority and digital inclusion getting next to no resources.

Specifically, the Government has announced that up to £830 million of licence fee payers' money is to be spent boosting superfast broadband. The aim is to make us number one in Europe on the availability and average speed of broadband.

There has also been talk, from both the previous and this government, about turning the mobile operators' 3G spectrum licences – for which they paid over £22 billion – into unlimited licences at no cost, in the hope that this will encourage them to invest more in their networks. Given the lack of public discussion about this, I can only assume that no such deal – which would have an opportunity cost of billions to the taxpayer – has been agreed.

The connection between all this and *Waiting for Vodot* is that the only consumer applications that need fast broadband are VOD and some computer games. Actually, it's not clear that even VOD needs *fast* broadband. Take away VOD and there's not much of a consumer case. Certainly for digital inclusion, none of the relevant applications need fast broadband: nice to have, but surely not a priority for public spending.

If not *consumer* benefits, what about the *economic* benefits of superfast broadband?

Google recently published an excellent report on the UK internet economy, commissioned from the Boston Consulting Group. The report includes some revealing international comparisons. These confirm other evidence that, at least up to this point, *the availability of fast broadband has in reality had minimal impact on internet penetration, usage and impact*.

We're always hearing about Korea and Japan and – true to form – they're ranked 2 and 3 on BCG's overall measure of what they call e-Intensity, just behind Denmark. However, this is entirely driven by Korea and Japan's top two rankings on so-called *Enablement*: the penetration and average speed of broadband. Currently, the UK is at 14 and the USA at 22 on Enablement.

In contrast, on *Expenditure* – e-commerce and online advertising – the UK is at 1, the USA at 3, Japan at 7, and Korea at 12. This is about businesses and consumers *actually using* the internet for business purposes. Superfast broadband is largely irrelevant. Anyway, if businesses want it, they'll pay for it.

This and other evidence should, at least, make us cautious about prioritising superfast broadband over the other two options. We need a fuller and more thoughtful and evidence-based discussion of the likely costs and benefits of the alternatives.

To be fair, no-one knows which will be the most important online applications in future, although we know more than assumed by those who simply argue, *"If you build it, they will come".* The fact that fast broadband has had little impact to-date does not necessarily mean that it won't do so in the next few years.

Against that, there's the argument that, if we were to limit the initial investment to extended pilots, we'd reduce the risk of either overinvesting public money (at a time like this!) or investing in what turns out to be the wrong technology. This last point is important: there are many ways of delivering fast broadband and, for some, costs are falling fast. The right solution will probably use a mixture.

All I'm proposing is a *proper debate based on the available evidence*. So far, we haven't had that – and there are some powerful commercial interests that would prefer us not to.

In contrast to the current policy of prioritising superfast broadband – with little if any discussion so far of the options, costs, risks and benefits – I believe there's a strong case for *allocating at least some of the available resources to support digital inclusion*, on economic as well as the obvious social and fairness grounds:

- The costs are almost certainly lower than for extending superfast broadband beyond what the market will provide
- Digital inclusion can use some of the excellent skills and resources already developed to drive digital TV switchover
- In the long term, there are large potential savings if most of the digitally excluded - the main consumers of public services - go online. The immediate benefits to those individuals will be from other applications such as email and home shopping but, once they're routinely using the internet, both they and the taxpayer will benefit from public services going online.

My recommendation is that, instead of aiming to be number one in the speed and availability of superfast broadband, we should aim to be number one in *online take-up and public service delivery*. This will also open up many new opportunities for e-commerce and for exporting applications in what's likely to be a growing global market for reducing the costs of public service delivery.

This can be achieved by allocating some of the resources currently planned for superfast broadband. At the very least, we should seriously explore a range of options rather than simply assuming that all the resources should go into fast broadband.

To sum up, I'm really making only two points:

First, *there's overwhelming evidence that the long-predicted and much-hyped revolution in TV viewing is not about to happen*. VOD will continue to grow but remain peripheral to mainstream TV viewing for the foreseeable future.

Secondly, this matters not only to companies, which must make their own decisions, but also because *both the previous and current governments appear to see VOD as a justification for prioritising superfast broadband over other ways of supporting the UK internet economy*. My recommendation is to put less emphasis on superfast broadband and more on universal basic broadband, digital inclusion and, eventually, online public services.

Finally, a brief word on the recent BBC settlement. As always, I take the viewer's and listener's perspective.

On the negative side, I believe this is equivalent to the biggest ever cut in the licence fee. It will bring the licence fee revenue of BBC Television down to less than 20% of total TV revenue, while pay TV continues to grow and TV advertising remains roughly steady in real terms.

It also reflects further erosion of the BBC's independence, since the Government is using licence fee payers' money for a wide range of purposes other than funding the BBC's UK services. To be fair, this follows the precedent set by the previous government, which diverted some of the licence fee to fund digital TV switchover.

On the plus side, the settlement will provide several years of much-needed stability for the BBC. We also have Jeremy Hunt's word that both he and David Cameron are strong admirers and supporters of the BBC – a Conservative creation - and respect its political independence.

Because of the budget deficit, there are unusual times. The real question is: what happens after 2016? There are two extreme scenarios:

At one extreme, the latest cuts are part of a long-term policy of chipping away at the scale, scope, and independence of the BBC, partly for ideological reasons and partly to appease Rupert and James Murdoch, to ensure their continuing political support.

At the other extreme, the cuts are a short-term emergency measure to take some expenditure out of general taxation in response to the budget deficit. On this scenario, the BBC's funding and independence will be restored when circumstances permit.

Time will tell whether the truth is closer to the first or the second of these. VLV is the only independent organization specifically representing the interests of viewers and listeners in these debates. Its role will be crucial.

[4,500 words]