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Exclusive Interview: The 'Long Tail' Interrogated (part 2)

Last week the [fifth Telco 2.0 Executive Brainstorm](#) continued its theme of business model innovation at the intersection of telecoms, media and technology by welcoming back Will Page, Chief Economist at the MCPS PRS Alliance, a copyright collection society that represents over 50,000 songwriters and 5,000 publishers.



Following a [teaser on this blog](#) a fortnight ago, Will took the opportunity to present, exclusively to Telco 2.0, new research - based on an unprecedented analysis of digital music sales data gathered over a year - that opens to question the received wisdom around the ['Long Tail' theory](#), and helps to re-define what it actually means and for whom. The presentation created quite a stir at the event, in the media and blogosphere. Here, Telco 2.0 discusses at length the presentation and the reaction to it with Will Page.

Telco 2.0: At previous Telco 2.0 executive brainstorms you've covered file sharing, the economics of two-sided markets and now the long tail. Coming from outside the Telco world, how useful do you find the events?

Will: Very! It's ironic that we live in a world of convergence yet too many of the disparate camps like to remain in their pigeon holes and preach to the converted. What Telco 2.0 events do, by allowing someone from a copyright collecting society to speak openly to an audience predominately made up of ISPs and Telco operators, is invaluable to both content and connectivity businesses.

You can see the importance of this more and more now. We have an truly awesome CEO of [UK Music](#) (the newly formed music industry trade body) in place now - [Feargal Sharkey](#) - and he's spending an increasing amount of time at OfCom. Two years ago, that simply would not be happening. So, in many ways, what the Telco 2.0 Initiative does in terms of bringing different industries together is ahead of the curve.

Last week's Long Tail presentation was a good example of this. I first met [Andrew Bud](#), Executive Chairman of MBlox (and now Chair of the Mobile Entertainment Forum) and a key collaborator on my analysis, at a Telco 2.0 event back in October 2007. I can't think of another 'platform' where our paths would have crossed, even though both our businesses share surprisingly similar characteristics.

Telco 2.0: For those who follow Telco 2.0 but missed the presentation, could you bring them up to speed on what exactly you, your colleague Gary Eggleton and Andrew Bud have been working on over the past few months?

Will: Sure, it's worth going back to the beginning as it's been an interesting journey. Firstly, like so many others, I read the [original Wired article on the Long Tail](#) in December 2004 and was genuinely inspired by

it. For the next two years I was active in the blog-to-a-book website and have to [credit the concept as being one of the principal reasons behind moving to London to work in the music industry in the Summer of 2006](#), ironically when the book came out.

I guess the presentation I gave last week reflects what I've learnt in the two years since from working in a collecting society, an organisation which by default is in the long tail business. Indeed, the Performing Right Society (PRS) has been dealing with long tail markets since 1914. The whole purpose of constructing and offering a collective licence is that it doesn't matter if it's a song is a hit or a niche, all the tracks have been licensed under a blanket agreement.

Given the clear relevance of collecting societies to the 'long tail' debate, I was surprised to see so little mention of them in Chris's book - or the blogs that followed. For example, our US equivalents' ASCAP and BMI don't appear once in the book's index.

For those who weren't there, let me break the presentation down into three parts. It began by looking at the evidence in terms of actual historical data. I drew upon a great expression that I learned whilst in the Government Economic Service, which is to always strive for 'evidence-based policy making' and resist the temptation of 'policy-based evidence making'. Increasingly, when I hear those words "here's another great example of the long tail at work", I'm inclined to expect that claim to lean towards the latter of the two.

I made the point that looking at volume-based [Rhapsody](#) data, which much of the long tail application to music has been 'built' around, is like a glass half empty - at best. We need to also consider value, and by that I mean not just retail spend, but marginal profitability in terms of what gets back to the artist and songwriter, and also 'displacement'.

One achievement of my two years at the MCPS PRS Alliance is to get 'displacement' into the everyday lexicon of the UK music industry. Is every digital track sold to be celebrated (a P2P user now gone legitimate)? Or regretted (a £9.95 album sale lost)? The reality of the the long tail is now being uncovered by many stakeholders in the music industry's [head](#) (hitmakers) and tail (poor sellers).

The second part revisited 'histograms' as a way of plotting the long tail. Andrew Bud, who's been like a Professor to me throughout this project, put me onto a fantastic book published in 1956 by Brown, entitled 'Statistical Forecasting for Inventory Control', and which described the importance of log normal distribution as an analysis method.

This concept is not radically new and is still discussed today ([for example, Chris Anderson refers to log normal distributions in his speeches and blog too](#)). But for me this book was fifty years ahead of its time.

Using this approach our team constructed log normal intervals and plotted an unprecedented amount of digital music data over a significant time period. The basic shape of consumer demand for digital music clearly fits the log normal distribution..."with eye-watering accuracy". It was really striking. There are many new schools of thought, but the old rules seem to hold truest.

The difference between a Pareto-style distribution and a log normal is neatly summarised by Chris Anderson in his recent response to my analysis, below:

"...The two distributions look similar at first glance, and you have to plot them log-log (or fit them with a statistical package) to tell the difference. Long Tails are "heavy-tailed" distributions, where a lot of the total volume is the tail, while lognormals are more like the classic top-heavy hit distribution..."

The third part of my presentation at Telco 2.0 last week concluded with two important slides. The first one plotted two heads. The first 'head' was the concentration of tracks which sold very little or none at all. It questioned whether the net revenue generated from these tracks cover the real sunk and commission-based costs for a.) getting the song there and b.) getting money back out of the system.

The second 'head' was to show the effective average revenue per track in each 'bin' (or statistical grouping of data). This was a crude averaging method but it proved highly illustrative. The inequality in revenue between hits and niches was jaw-droppingly stark, justifying Andrew's observation that "in this tail, you starve".

For example, we found that only 20% of tracks in our sample were 'active', that is to say they sold at least one copy, *and hence, 80% of the tracks sold nothing at all.* Moreover, approximately 80% of sales revenue came from around 3% of the active tracks. Factor in the dormant tail and you're looking at a 80/0.38% rule for all the inventory on the digital shelf.

Finally, only 40 tracks sold more than 100,000 copies, accounting for 8% of the business. Think about that - back in the physical world, forty tracks could be just 4 albums, or the top slice of the best-selling "Now That's What I Call Music, Volume 70" which bundles up 43 'hits' into one perennially popular customer offering!

This chart really drove home the theme of the presentation: what does the 'long tail' actually mean, and for whom?

If you're a for-profit aggregator, it means one thing, if you're an individual copyright holder, it means another. Again, this is something the debate has largely overlooked to date, yet everyone 'down here on the ground' increasingly recognises it.

As a not-for-profit membership governed collecting society, I'm extremely fortunate to be in unique position to make a balanced interpretation about the facts, and what they mean to both sides - individuals and firms. My interpretation is in no way gospel, but I can at least build an argument that's based on evidence from the coal face.

My argument, in summary, was that the future of business is definitely not selling 'less of more'. Scale matters. To tee up the interactive debate with the brainstorm participants I concluded with a final slide posing the dilemma facing firms in the content value chain as regards their investment strategies. Thanks to the way Telco 2.0 allows the participants to 'blog live' with the presenters using lap tops and special software [Ed. - we call the format '[Mindshare](#)'], a mountain of comments and questions flooded in.

Telco 2.0: Of the (literally) hundreds of questions the audience threw at yourself, your colleague Gary Eggleton and Andrew Bud, which would like to answer in more detail here?

Will: Firstly, I'm genuinely grateful for that 'blogging facility' you have at Telco 2.0. The day after the presentation, your CEO emailed me every question, idea and challenge your audience threw at me - that's a fantastic facility, a "free lunch" of excellent feedback and advice. My thanks to everyone who posted.

Now, I think there are three themes which I can draw from your excellent interactive facility at the conference and expand on here: (i) **the black market**, (ii) **digital inventory costs** and (iii) **scarcity**.

1.) The Black Market (P2P)

There were lots of really insightful questions on this topic which can be summarised by this one: *'is the P2P market more or less concentrated around hits than the legal one?'*

To help answer it I would direct readers to a now infamous paper I published with Eric Garland, CEO of Big Champagne, titled '[In Rainbows, On Torrents](#)' ([pdf](#)).

My hunch, based on the evidence we presented in that paper (pointing out the 2.3 million illegal downloads of Raidohead's new album when it was also available 'for free' on their own website), is that the black market is even more hit-centric.

As Eric would argue, popular music is popular wherever it is popular, in that you can't be a hit on iTunes without being a hit on Bit Torrent ...and vice versa. For further reading, I'd suggest the sociologist William McPhee's groundbreaking theory of exposure, found in his 1963 book 'Formal Theories of Mass Behavior'.

2.) Digital Inventory Costs

These costs are often overlooked by those claiming the long tail is a 'panacea' for artists. Making recorded music has many independent costs, some have gone down, others have gone up (what economists call '[cost disease](#)').

Similarly, there are administrative costs to uploading tracks onto digital sales platforms and getting the

money back to the creator. For example, indie 'niche' labels need 'aggregators' before they can join the main digital music platforms, which is a wholesale market, just like in any other business, digital or bricks and mortar. The same old rules of transaction costs and economies of scale apply there too.

I wanted the audience last week to consider another old rule of economics - cost-benefit analysis. Do the net benefits outweigh the costs (both upfront and commission based) of joining the long tail? It's a simple question to ask which few bother to do and hence it's infuriating when you read propositions like 'all you need is 1,000 true fans'.

3.) Scarcity

There was a wonderful comment from one anonymous participant in the room who said:

"...Scarcity forces a 'competition'-like structure to pass the cut-off point, which paradoxically creates value by increasing the effort of content suppliers to win...."

This really sums up the point of my presentation. What I said was not particularly new, in fact its basic common economic sense, about which we sometimes need a reminder. This quote points to where I'm going to take the research next. Not the 'head', nor the 'tail' - but what happens to the 'body'?

My hunch is that without scarcity, the body is underexploited. The quote provides context for a point I made on stage and in an article in The Register: "Is the 'future of business' really selling less of more? Absolutely not. If Top of the Pops still existed, it would feature the Top 14, not Top 40."

Telco 2.0: You've definitely got the debate started as there's been significant press coverage since the publication. Have you found the reaction in the media by those who were and weren't there?

Will: Tricky. Many journalists have agendas - some you agree with, some you don't. Sometimes the meaning of your work gets lost in the differences within those agendas. My agenda is an academic one, like the great Scottish philosopher Hume would of wanted, one of conjectures and refutations. Let's take a theory and put it to an impartial evidence-based test.

Firstly, it was great to see [Eric Schmidt, CEO of Google](#), putting forward a strikingly similar argument to myself on McKinsey's website recently.

In addition, I was pleased to see [The Register](#) picked up on the role of a collecting society, an institution that receives surprisingly little coverage in Long Tail debate, yet has pioneered the creation of long tail markets for musical copyright through patent pooling and blanket licensing for almost a century.

It was great to finally get a mention on [Chris Anderson's blog](#) - given that I published my [first set of long tail statistics \(pdf\)](#) back in November 2006!

Given that the source of my data cannot be disclosed at this stage and the slide deck from the Telco 2.0 event cannot be circulated (and I'm genuinely grateful to those in the audience for understanding this point), I thought he did a pretty good job at blogging about a presentation he wasn't present at. Hopefully this interview will help him fill the gaps.

However, I still think he's focusing his arguments on the less-relevant volume-based data, and not looking at value in all of its definitions, Or, as an impatient CEO might say 'show me the money!' Volume-based discounting has, is and always will be prevalent in any market, be it online or offline. It is a simple and widely accepted fact, and once you accept that it becomes increasingly difficult to hold a conversation about why the future of businesses is selling less of more.

On the downside, one of your participants published a blog article that was so far off the mark, it made me wonder if he was actually paying attention (or more likely, understood the complexity of the music industry). For example, he describes my focus on individual sales as very 'old economy'. Yet the erosion of the unit value of musical copyright is the biggest issue facing the membership of the MCPS PRS Alliance.

Why? Because we're a membership-governed not-for-profit organisation that licenses, collects, processes and pays out royalties for our 50,000 individual song writers. He also goes on to say I used a data set where the concept of margin is irrelevant, which is the completely reverse of what I actually did. I presented data and then introduced the concepts of marginal costs (the real costs of managing and processing digital

inventory) and marginal benefits (how much of that unit value actually gets back to the creator) from the outset.

Trying to have a balanced debate about the long tail, and avoiding knee jerk reactions and hysterical claims, is hard, very hard! Everyone immediately becomes an expert in a specific market or a statistical rule that they actually know relatively little about.

I feel for Chris on this who pioneered this concept, as he must have had to stare this problem in the face for a lot longer than me. In the music industry, which has experienced the force majeure of disruptive technologies like no other, and for over a decade now, you get a little tired of arm chair critics telling you what to do with the benefit of hindsight, and little understanding of what options were available at the time.

Nevertheless, as the legendary [Peter Jenner](#) would always say every time meetings between the content and connectivity industries collapsed into disagreement and disarray the important thing is that we keep all the parties talking, exchanging ideas, evidence and advice.

Telco 2.0: Finally, how transferable is your work? What does it mean for other areas which Telco companies are looking to get involved in, such as Television, Film and Books as well as applications?

Will: Very! Discovering a log normal distribution in one area of media provides a template for evidence-based gathering, interpretation and decision making in others.

I'd stress caution though - you need to order the questions correctly. Just as when you look at international comparisons in order to learn lessons for domestic issues, you need to ask 'what works over there' and ONLY then ask 'of what works over there, and what could work here?'

There's been far too much decision-based evidence making to date along the lines of "the long tail must work so find me a great example of it working". That's in no way the fault of Chris Anderson. He (like myself) goes to great pains to correct people's knee jerk reactions, but it's standard fare when a new economic theory comes along, people get a wee bit hysterical about it.

I think that the most important lesson to come out of this work is a real back-to-basics question: is scarcity a constraint or is it a discipline? I think that you can ask this question from the outset, regardless of what type (and what size) of media inventory you intend to carry across your network.

Finally, I'd like to reemphasise the importance of impartial evidence-based analysis. My work is not about trying to prove anyone wrong. I'm looking at how well their case stands up when presented with evidence. On that note, perhaps it would be apt to end with a suggestion to those proponents of the long tail theory, by drawing upon a quote from the late great John Maynard Keynes: "When the facts change, I change my mind. What do you do, sir?"

[Ed. - After the interview we asked the Telco 2.0 analysts to comment on the transferability of Will's analysis and the 'what' for telcos:

Chris Barraclough, Consulting Director: Value comes from: catalogue breadth/depth + distribution (which includes searchability and multiple customer touchpoints, including affiliates) + evaluation. Amazon has market power because works hard on both distribution and evaluation. You can exploit a longer tail than your competitors if you can a.) lower your cost base further than them (ie afford to carry more inventory than them) and b.) price cleverly (link price to volume so that lower volume items are priced higher).

Martin Geddes, Chief Analyst: We must appreciate the uniqueness of different content types and distribution network. On the latter, for example, iTunes differs from last.fm due to pricing policies and content recommendation systems. In terms of content types music is weak in metadata (people don't write much about individual songs), unlike richer media like movies (where there are lots of reviews and information on the participants), games, software apps, and TV shows. So, my advice is be careful about extrapolating lessons between different media and indeed even between sub-genres within the same medium. Sport, porn, and news video all have very different dynamics, for example.

The big 'so what?' for telcos is that a lot of 'long tail' content may have no commercial value, but may have considerable social value to users (e.g. photos of your kids). It still needs to be transported. This makes it all the more important to

cater not just for 'high QoS' material like streaming HD movies, but also to be able to dynamically subload other content. Watch this space for interesting developments in this latter category...!

James Enck, Senior Associate Analyst: It would be useful to analyse how the value of content changes over time. Var Gogh didn't sell much during his lifetime, Grateful Dead fans favor bootlegs rather than studio recordings, and we all know the story of the Arctic Monkeys. In other words, it's conceivable that content moves from the tail to the head over time, and those who don't spend time in the tail will always be surprised at what appears in the head.

The depressing truth for telcos is that replicating the head does nothing for differentiation. Moreover, if content strategies are geared to churn reduction rather than incremental revenue, then what disincentive to churn is there if competitors have the same 4,000 film library? Long tail content can be highly appealing as a differentiator *if it maintains a local flavor*. www.pod3.tv is one example in the UK, which to my knowledge, no telco has sought to engage with. I'm baffled as to why Telekom Austria seems to have stopped the [Buntes Fernsehen](#) project, which to my mind was a very interesting way to differentiate on long-tail content in a way that's highly relevant to a local customer base.

Keith McMahon, Senior Analyst, Content Distribution 2.0: The key message for me is that there is no silver bullet in merely loading content onto the net. The challenge is beyond simply distribution. The promotional aspects will be a really hard skill for telcos to replicate over a wide range of content. They are probably much better partnering, developing 'two-sided' enabling business models and shifting the demand risk to parties who know better.

Alan Patrick, Senior Associate Analyst, Content Distribution 2.0: I did Mechanical Engineering at University and studied inventory management theory. The thing I recall is that nearly every inventory based demand curve was Log Normal. The big issue in the online world is the lower transaction costs which supports a "positive returns" power law dynamic, i.e. big get bigger. This drives an increased rush to the 'Hit Head'. In other words any service which had a long tail distribution would rapidly move to a bigger hit head in any online world.]

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COMMENTS

Re: the black market:

I think vital points need to be considered here:

1) P2P's main feature is pooling: One can download a large file quicker using the P2P network, quicker than we can using most single distribution sites. So downloading a new album, whether free or not, as its released would be quicker by P2P than direct - at least most of the time.

2) Many tracks/movies/etc. are downloaded by fans whom simply cannot access the material from the the legal distribution network! (back catalogue anyone? Albums on Vinyl, or CD's from groups that disbanded in the early 90's?)

Then there's the guy on ebay that I bought a 10 year old CD from, who opened the seal, ripped the CD, then posted it

Posted by: DHD | [November 17, 2008 06:2](#)

Would be very interesting to do two further analyses :

1) what would the impact on audience behaviour be if all music felt 'free' to download (i.e. via a license fee at an IS subscription service) - Will's data seems to suggest that the same distribution would apply but would be good to see more data

2) do niche audiences (e.g. the classic Netflix US-domiciled Bollywood audience example) follow the same laws too - do niche audiences exhibit other characteristics (perhaps emerging as breadth of subject narrows) ?

Thanks a great interview !

Posted by: [tim parsons](#) | [December 10, 2008 12:1](#)

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