

Program Information:

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This is a series about long-term thinking, and what's been especially fun about it is to talk to speakers and get them engaged and they then realize that what they're doing actually has a long-term thinking aspect to it. Now it is the case here that one of our-- actually, our first sponsor Will Hearst is here and will join Chris on the stage, said You know, there's really a time dimension to this. And he'll tell you something of what he thinks about that tonight.

So I called Chris, and said there was a time dimension, and he said, Yeah I know.

And so we got into exploring it further, and so this talk, in anticipation in just a month or so,

The Long Tail, which is coming out, is part of expanding what has turned out to be an extremely powerful idea.

One of those ideas that will probably be around for a couple decades, because of a change that the internet has wrought. And so your part of that process tonight, I'm wearing the yellow hat as an indication these are the people who collect your questions will bring them up to me and Kevin Kelly in the front, and it's going to be an editor-fest. Will Hearst is an editor, Chris Anderson is an editor, I'm an editor, Kevin Kelly's an editor. That's what we do. Chris Anderson, it's yours.

Thank you and good evening. What I'd like to do first is run through about twenty minutes of just a little background and framing of what The Long Tail is, what it means, and then change in dimensions in looking from the traditional concept of the long tail to the time version of it. Um, there's going to be a lot of charts and data, you don't have to pay attention to it, it's illustrative, the book, the research, the article, and most of my thinking about this is all driven by numbers.

We're very fortunate to live in a moment where the economics of the 21st century lie in the server databases of Google and Yahoo! and Netflix, and Amazon. And if you only look, you can see extraordinary things, and surprisingly few people are looking, and I've been fortunate enough to have their cooperation, and you'll see some of that, but we're just scratching the surface of the really different economics, culture, and lens on our culture, lens on our world around us, that we can see out there in these databases.

It starts with numbers. And this is the sort of the shape of our age, I believe.

It's called a power law, you may know it also as a Piretto, Bilford Piretto was the Italian economist who observed that 20% of the Italian population had 80% of the land, leading to the 80/20 rule, the notion that a small number of things have a large impact. Low-frequency, high amplitude events...earthquakes are distributed in power laws. A small number of big earthquakes and a large number of small ones. Populations, cities distributed in power laws, it's a small number of very big cities and a large number of small ones. The shape is kind of a one over x, it's an exponential, it's the simplest possible curve, and yet it turns out to be absolutely ubiquitous in human affairs, economies, and nature itself.

If you plot a power law linearly, it looks like that. With a small number of things on the left, high impact on a large number of things on the right, that

happens to go on forever. I've cut it off, I've truncated it at a random number. If you plot it log log, which is to say that each axis now goes in factors of ten, you should get a straight line. Sometimes that line-- the slope of the line doesn't matter, depends on the market, it depends on the circumstances, it depends on the units you're using, but it should be a straight line. Unless it's not. This is US Box Office over a 3 year period. The box office gross is on the left, exponential, in a large scale, and the ranking of the film, the number one film, which did several hundred million dollars, all the way down to about fifteen hundred films. Something happens right there. And what happens right there is really interesting because it sort of tells you everything you need to know about the distortions of the last century in our economy and culture. What happens right there is not that the films got worse. It didn't switch into foreign languages. It didn't stop making films. What happened is they ran out of screens. The carrying capacity of the American theatrical network, mostly the big-screen megaplexes, is about a hundred and twenty films a year. However, the number of films shown in film festivals is closer to 13,000. The vast majority of films never make it to megaplex. They never get out there. There are not enough screens to show all the films. And so as a result, you end up with this distortion, you end up with the marketplace apparently falling off the cliff. Not because people didn't want those films, not because they didn't exist, not because the films weren't good, but because of the scarcity, of the bottleneck, in distribution. And so in a sense, everything we think about, the extent that we thought Hollywood represented American tastes, to the extent that we thought that hits were what our society collective society wanted, it turns out that in fact hits are what the distribution channel wanted. They only had so much shelf space. And so for channels of television, for radio channels, for retail shelf space, every one of these traditional ways of distributing content, where I started my research, has a scarcity effect. Every one of those scarcity effects, every one of those bottlenecks, ends up distorting the market and by extension distorting our culture. In a sense, it looks like this. There is the same power law, and yet it just gets hacked off. Truncated. But now we're entering an era where you have distribution methods that don't have scarcity functions, or at least, they're pushed much further down. The internet has infinite channels and infinite screens and infinite shelf space. And so what you realize is when you go back to that line, you realize this pink bit right here is the latent market that we were missing before, because we couldn't reach those products. Because we couldn't connect supply and demand. And that right there is the market we're just now starting to explore, and it turns out to be remarkably large. Here's some actual data from Rhapsody, which is a subscription online music service that benefits from unlimited shelf space. What you have here, in the red part, is the albums and songs that are available in Wal Mart, which is America's largest cd retailer. It has about 4500 albums in the average Wal Mart. So these are the hits. And these are the albums that Wal Mart

has, and that Rhapsody has. Down here in the yellow, these are the niches, these are the albums, tracks, that Wal Mart doesn't carry, but Rhapsody does. What's notable about this is that although some complicated math involving converting albums to tracks, I calculate that the Wal Mart inventory is about equal to 25,000 tracks. Rhapsody, right now, carries 1.5 million tracks. Itunes carries about 2 million tracks. The peer to peer networks are looking at about 9 million tracks, there's probably 25 million tracks out there somewhere in vinyl, live, remix, all the other songs that are out there and could be and will be brought online.

Another way of looking at it is right here. This is Wal Mart's inventory, and this is Rhapsody's inventory. What we thought was the music market was a tiny tiny fraction of the music market. In fact, we're looking at overall magnitudes in increase and variety, and so too for dvd's. The average Blockbuster carries 3,000 dvds, Netflix is at actually 60,000 right now. Over here at Amazon, the typical Barnes and Noble or Borders carries about 100,000 books, Amazon's now tracking 3.7, there's probably another 6 million books out there. Bring in the network to used book stores, which are now sort of seamlessly integrated into these online marketplaces, and you could be looking at maybe as many as 10 million books in various languages. Extraordinary increase in variety.

And what you find is that although we'd assumed the retail channels had assumed that those niche low-sellers were insignificant, sub economic, just not worth carrying, in fact, when you add them all up, those onesies and twosies are starting to amount to a significant market. In music, they are closing in on half the market. In Netflix, about a quarter of the market. A quarter of their rentals are things that are not available at a Blockbuster. Amazon's also about a quarter. The books that are sold at Amazon are books that are not available at a Barnes and Noble or a Borders. All those numbers are growing. It looks like we're trending to an era where about half the market is sold through traditional retail channels, and the other half of the market is only available through these sort of abundant, unlimited channels, such as, with online in particular, but also things like the US Mail, another powerful network, as Netflix revealed.

So. Let's talk about the time aspect of that. There I've been sort of talking about mainstream and niche. So Blockbuster, Tower Records, Wal Mart, Borders, they tend to carry the hits. When shelf space runs at-- the cost of a shelf space for one dvd is \$22 a year, in Blockbuster. You need a lot of turns. You need to rent quite often to pay back its shelf space. So they have to carry the most popular items. So that's the way I initially looked at the long tail. Hits to the left, niches to the right.

But there's another way to look at it. When you think about it, over time, even hits become small sellers. Even hits lose their traction in the marketplace and they sell less, and so the tail's actually made up of a mix of some niche titles and some old titles. For fun, I thought I would just show you 2B's, that's the Bee Gee's first album, and this is Broken Social Scene's

new album, called Beehives. This one was a number one, and now is ranked around 20,000. This started at around 15,000, a very niche title, just a year ago, and is now at around the same rank. The two of them are right next to each other in the long tail, but one's an old hit, and one's a new niche.

So we're mixing these two markets together, and they obviously have different behaviors. So I set out to quantify this. What I'd like to show you over the next few slides is really just a work in progress as we try to quantify the long tail time. So if you tease apart the reds and the blues, you basically have two dimensions. You have one that's sort of, it's niche vs mainstream, broad vs narrow, and the other, new vs old. Both have decay functions. Both have a power law shape. But so how do you combine the two. Well, I realized that there's sort of a topology here. That basically, hits here, their sales decline over time. Well that's true for niche titles, their sales decline over time as well. But hits decline faster over time because they've got farther to fall. Niches decline more slowly, and there's some shape in there that will tell you a lot about the latent demand in the marketplace.

So what is that shape, and how do we quantify it? Well, this is messy. But research often is. What we did is we looked at the top ten, or the #1 albums for the last ten years, and we looked at their current rating. And so what we assumed is that the newer they were, the higher the rating would be. They all started at one, and the new ones, the one released this week, is still one, the one released ten years ago has fallen to some other level. So we thought if we scatter-plotted it, and then we could sort of run a little curve-fitting and see whether we could get a shape, and sure enough. But we could do more rigorous work than that.

There's a fantastic-- again, we're very lucky to live in a time where basically everything is measurable. Someone out there is tracking it. All these servers have all these data, increasingly they're available. There's a service called InfoFilter, which kindly let me in, and we started tracking the decay function of albums on amazon. Basically the sales rank goes up as the sales decline. So here is an Arctic Monkeys, which made it to, it was released right there, and obviously in pre-release, it went up the charts, then it peaked close to the day of release, and then it declined. So that's the decline function of an album that hit number 2 on the charts. Then we looked at other albums, we've done these for hundreds, but this one is a gospel album, also released around the same time, this one sort of started at number 500 and declined and now it's about 1500. So a more gradual decline, a more gradual decay function. So, you know, going back to this original chart, you can see that we're starting to kind of, if you wanted to, in music, you could start to have a sense of what the exponentials were, what the constants are, to describe each one of these curves. This is important. And here's why. What do these five artists have in common? These five artists were five of the top ten top grossers last year in the music industry. There is an incredible demand for older stuff. Some of it's because it's good, some of it's because we're nostalgic, some of it's because we can get it. But these are just the hits.

Each one of these did more than 50 million dollars in business last year. But half of the top ten last year were basically classic artists. I find it odd that U2 is considered a classic artist now, but there you have it.

So that's music. I'm going to now plow through a couple of other examples, because then we can turn to the interactive component with good will. But it's true for dvd's as well. There's a very interesting service called DVD Station. And what it does, is it takes a, it's got a box with a big hard drive, a terrabyte drive, and a dvd burner in it, and a screen. And you can put it in any store, it could be a Blockbuster, it would be the corner grocery. And you can basically pick a dvd, and it'll burn it and rent it and you can bring it back. It can have more inventory than a Blockbuster, but it doesn't have to. What it does, more importantly, is it alleviates one of the other problems of traditional retail, which is that it's very hard to find things. In traditional retail, the store is set up for one-size-fits-all, the new stuff is stacked a hundred high in the back, the older stuff is randomly put in some taxonomy that may not make sense to you. I remember looking for Akira, Japanese anime, is that science fiction, is it kids, is it foreign, is it drama, you know where section does it go in? You don't know and the clerks can't help you. What DVD Station does by being a kiosk is it allows you to have a Google-like functionality. You can search, it has recommendations, you can see previews, you can read more information about it. The two limiting factors in traditional retail are inventory and findability. This is an experiment in solving the findability problem. It's interesting what you see here. So right here the purple stuff represents the Blockbuster sales and the blue represents the DVD Station sales. These are the same dvds, but as you can see they're getting older. So here's the decay function over time, and what you see here is that the older titles sell better, are more popular, when you can find them. Maybe that stands to reason. And you also see there's this interesting structure right here. These are classics that people love, these are things that have passed the test of time, but have been lost in the aisles. Lost in the bins of a traditional Blockbuster, but findable through a more Google-like interface. And so what you see is that the curve is flatter. And that the area of the curve is non-zero. This right here, 5, 6, 7 years old, this world of Blockbuster, basically, their economics doesn't allow them to care about it. But if you have abundant economics where you can carry everything, you realize that the demand is non-zero. For instance, here's another way of looking at it. This is the demand for one year or older. Let's see how much larger it is for the kiosk, Google-like way of finding, or Amazon or Netflix way of finding it. Same inventory, just more demand for the older titles when you can get past the findability. What's interesting about the old stuff is that the economics which we assumed were worse are actually better. The reason is, is that the acquisition costs for DVDs have a decay function as well. A brand-new dvd costs about \$19 to buy, and in Wal Mart is sold for about \$16. They lose money on dvds, initially. Now it's a loss leader and they attract people into the store with these cheap prices and then sell them refrigerators. Over time, the

acquisition cost comes down dramatically. In the fourth month, it's now down to \$15, and then right around here, it becomes profitable to sell. Because you can see, the price, the blue line, declines gradually, whereas the cost, the purple line, declines more rapidly, and so the margins go from negative to very positive over time. So because the acquisition costs are cheaper, the older stuff is more profitable.

Interestingly, it isn't just more profitable, it's actually more satisfying. Netflix did some analysis on this. Netflix also has the capacity to have unlimited inventory and to recommend titles that you'll like based on your history, and to give you previews and samples and more information. What they find is that, as I just said, the older titles have a lower cost, so that's higher margins for them, but what surprised them is that the satisfaction ratings were much higher on the older titles, and when you think about it, this makes perfect sense. Older titles have passed the test of time. The reviews have come in, word of mouth has spread, people know what they think.

Newer titles, the quality of the titles is overwhelmed by the marketing. In its first week, what you're seeing is a huge flood of marketing from the studios. Maybe you haven't read the reviews, maybe you hadn't had a chance to talk to people, maybe the sort of consensus view has not come in, and so you tend to just sort of, you know, you're seduced by the marketing, that's how it works. And what they've found is that the ratings on the new titles were significantly lower than the ratings for the old titles.

So when you think about it, Blockbuster, which because of its need to stack them deep and high and to push the new titles the most, are the place where the movies cost the most and return the lowest satisfaction. Whereas Netflix is in the part where the movies in the older films where they push the man back over time, is in the part of the market where the movies cost the least and have the highest satisfaction. So Netflix is in the sweet spot of the industry, and Blockbuster is in the sour spot, simply because Blockbuster is driven by the tyranny of the new.

Google is another interesting example of this. Will's in the newspaper business, and I'm in the magazine business, and I can tell you that there's the notion that the new news is the important stuff, and the old stuff is pervasive.

There was the presumption that your front page is what matters, it's freshness, it's what's right here and now that is what's popular. But Google doesn't think that way. The way that Google algorithms work is that there's a number of factors that determine relevance, but one of the most important ones is incoming links. You know, the consensus view on how important, relevant and different content is. Older stuff has longer time to build up incoming links. Over time, the relevance, the quality, the sort of measured value of older stuff, rises. And Google actually doesn't even-- the spider doesn't even get to the new stuff.

So Google almost-- you know, traditional Google, obviously they have Google News and Google Blog Search, but traditional Google won't even know anything over the first 48 hours. And then over time, things get more relevant, not less. So as we see more and more of the traffic to all of our

sites driven by Google, we find that it's not going to the front page tradition, it's not going to the new stuff, it's going to the old stuff. Here's some data just from our own sites. We find that 66% of the search traffic is going to posts that are older than one month old. So 2/3 of it. And as a result, this is, just to unpack this, this is the new stuff here. This is the old stuff that comes from search, and this is the old stuff that comes from links.

What you're finding here is that this bit right there is driving demand. This is the growing part here. The stuff that's coming from search. And it is traditionally, you can see, the old stuff, the stuff that is more than one month old. As a result, the archives are suddenly becoming really really important. And you're seeing the balance of the traffic growth going to your old stuff. This is absolutely new, and suddenly makes you realize that the presumption that there was no value, that you barely had to leave them online, you certainly didn't sell ads against them, is turning out to be completely wrong. We now realize that quality doesn't disappear over time, instead recognition increases. I'll give you a few other examples before we turn to Will. The rise of print on demand is a real driver toward the backlist in books. Again, one of the problems with books is the notion of shelf-space. The fact that the inventory process of storing books is significant. How would you store books with near-zero inventory? You store them from digital files and you print them on demand. Print on demand technology is basically just a big photocopier. But today, you'll buy books from Amazon that are print on demand and you don't know it. You cannot tell. The color, they have proper colors. They have charts, graphics, you can't tell, they're not marked in any way. Amazon just bought a print on demand company, there are six of them being started just this year, and what's fantastic about this is it not only allows you to take the older books, rather than taking them out of print, just taking them to print on demand. They cost nothing to store, you print in small batches, sometimes as little as one, and the price is a little bit higher but not a lot higher and the margins are positive because there's no costs. As it sits there, it doesn't gather dust. It doesn't exist, in a sense. Till it's printed. What's important about this is it not only allows them to monetize these archives, monetize the back catalogue, but it also allows them to smooth out demand at the front. One of the big problems with the book industry is the notion of returns. One of the policies of the bookstores is that they're allowed to return new book titles for free if they don't sell. Why would bookstores over-order, grossly over-order? Because they want to make sure they don't run out. If costs are borne by the publisher, they might as well over-order. And pulp the rest. Send it back for credits. However, there is a small cost, because those books sort of have to sit in a warehouse, the bookstore's warehouse, so if they could avoid that they would, they just don't want to run out. Well, right now we print books in batch. Big batches, ten thousand, twenty thousand, a hundred thousand. But if you could say, well, it's not going to be sixty thousand now and sixty thousand six months from now. It could be sixty thousand now and as much as you need from now on, we can get it to

you in 24 hours, we can print 30, 40, 300, 3000, you can smooth out the demand, and you won't run out, then the bookstores won't over order. So technology that was designed to sort of unleash the value in the archive is actually going to have most of its economic impact in smoothing out demand at the head of the curve. That's a really important advance in an industry that's struggling. Movies, right now. We're seeing the rise of very very cheap dvds. Dvds again, especially through Amazon and Netflix, are a great way to distribute content without shelf space constraints, and there is demand. For television, you're seeing the rise of classic collections, which are again, you know, I Love Lucy or anything else, there is demand for this. Some of this is nostalgia, some of it is good content. DVDs are a great way to distribute it. One little note, in our analysis we have found that television represents the biggest divide between the amount of produced content and the amount of available content. The television model is one of just, produce it, it exists ephemerally, it's broadcast for a brief window and then disappears. The vast majority of television isn't syndicated, the vast majority of television hasn't made it to dvd, the vast majority of television wasn't tivo'd, it's just gone. And yet it exists out there. And if you can clear the rights, which is something perhaps we may talk about a little but more with Will, you find that there is an appetite for old tv. If only you can get it out there. A final example I wanted to give you is games. I'm a gamer and I grew up in the generation that had the Nintendo and the Atari. And a lot of us think of this stuff very fondly. However, it's not available. If you don't have the original machine, you can't play the games. There's this notion of abandon-ware. Manufacturers now actually not only don't sell them anymore, but they won't let anyone else sell them. So they live in this netherworld. One of the reasons is that the retail channels don't support old games. They're niche products, they have a small demand. But they're a passionate demand. But there's a new distribution channel in video games. It's online marketplaces, and all 3 of the new consoles: the X-Box 360, the Nintendo We, and the Sony Playstation 3, are all going to have broadband distribution of games, and Nintendo in particular is building an emulator for all of its old systems right into the machine. So every game they've ever made will be playable on the new machine. Distribution costs, inventory costs, near zero. There's demand for this, and they're finally able to tap them. So there's more of this in my book, which is coming out in July. But we can get into further detail by now turning to Will, who knows a lot about this. Will? Great talk, Chris. Last time I saw you talk on these subjects was down in Yale and you added a tremendous amount of dimension, so I guess the first thing I want to do is maybe just slow the pace down a bit and go through some of the things that you talked about, but let's start with-- there's two dimensions of time that I'm particularly interested in, and you've probably done the best job I've ever seen of quantifying these things. And you can talk about these things in terms of facts. But the two dimensions that interest me, one is sort of an evolutionary process. I think if you're talking about

time, you're talking about change and evolution. And certainly in this sort of large sphere of media properties, there are changes in distribution, changes in economics, there are some perpetual things and I want to come back to that in a split second.

But you do see these bottlenecks and I'd just like to sort of think out loud with you a little bit. But looking at television, let's take that for example, when I was a kid, there were basically three networks and a bunch of other also-ran local independents, so to speak, and that was the scope of television, and it seemed to satisfy people. But with the technology that cable television brought into the marketplace, starting with out of market and better signals and people that had two of the networks getting three, but you very rapidly became all 13 channels to have content. And then there was a creative response to that, and a kind of marketplace evolutionary response because all of a sudden you had MTV, there was nothing like that before. We had CNN. We had Discovery. We had all kinds of new content response. So I'm kind of interested in if the internet has sort of changed publishing and magazines were changed maybe a decade earlier by desktop publishing, you know there seems to be a kind of evolutionary pattern when you blow open the distribution and change the cost of entries, you get a creative response. So I wondered if you had any thoughts about the blow-open internet distribution as it moves up into video, which is sort of the way a lot of us get news, for example. What's your bet about the...let's start with the creative community response.

Let's just start with, I'll show you one bit of data on this. So we have a precursor to the internet, which is in the form of cable. We started with four networks, and then as people got more and more channels, we started to see the beginnings of an abundant distribution. And we now have nine hundred channels, maybe even a thousand channels. This right here, the white line, represents the rise of what they call multi-channel, which is basically what they call cable, and it's basically 95, all homes have cable. And the black line represents what that did to the networks.

Network share.

Network share, exactly. And what we found out is that we went from people watching the network 75% of the time back when fewer than half the homes had sort of this abundance of choices. Now it's less than 50% of the time is spent watching the network. So what that means is that as people-- you know, in 1957, 75% of Americans watched I Love Lucy on a Sunday night. It was kind of the peak of lock-step culture, where we all did the same thing at the same time. The peak of the water cooler era. Now that we find more channels, more choice, we find we're fragmenting, we're distributing across these many channels. The modern equivalent of that is YouTube. Or Google Video. And we've now gone from 900 channels to an infinite number of channels. We've gone from commercial content to skateboarding videos uploaded. We find that we've gone from a kind of commercial marketplace, where you had to have a commercial reason for making video, to an amateur

marketplace, where you don't need any reason to make a video because the cost, everyone has a camcorder, and distribution is free. I think what you're finding is two things. First of all what you're finding is that the pool of producers is expanding hugely, because we've democratized the tools of production and democratized the tools of distribution. So before, you needed to have gotten into the machine to get your stuff out. Now you don't have to get into the machine. The machine is-- we all have the necessary tools. You don't have to be a member.

You don't have to be a member, exactly. And we're also finding that the pool of viewers for this content is also growing. We assumed that there was no demand for amateur skateboarding videos. We assumed wrong. You know, YouTube is partly a reflection of pent-up demand for commercial content not distributed at the right time, and the right channel. Sort of TiVo in the air. And partly a demand for stuff that was never commercial in the first place. I think we're seeing a renaissance in culture. We're seeing this extraordinary explosion of talent, of variety, of choice, of cultural richness, that we'd only had glimpses of before in underground film festivals and one on one sharing. Now we can actually measure it and it turns out to be massive. Now I would certainly agree, and I think it's worth mentioning that simultaneously, there's sort of an economic shift going on too. Because in the first part, in the left hand side of this diagram, there's kind of a near panic in the traditional media corporate offices, and in the right hand side, which looks like the disaster continues, there's actually been a sort of shift in the kind of strategies of the big media companies. So where the NBC, ABC, CBS's of this world were kind of being struck in the left, they now own cable networks, and are trying to reconstitute the economics by sort of participating in the phenomenon. So where this all goes is interesting. There is a kind of consolidation afoot, and it's not, to my way of thinking, entirely accidental and random that Fox is now the owner of MySpace. There is a sort of economic second response. You know, when railroads get to be too many, pretty soon you have consolidating railroads.

You could talk about this for a while.

I think about it sort of in slightly economic terms. Before I was at Wired I was at The Economist, so I've been sort of drilled in economics. You know, we see, you know, we now see a huge expansion of supply. Oh, and by the way, before you go, I want to also make a point that while this looks like some sort of declining business, and let's all diversify into golden oil, in fact the media business during their entire slide here has been lower left to upper right in terms of--

It's total dollars!

So the number of people involved, the total economic dimension of this has actually gone up with the fractionalization of audiences.

You know, one of the paradoxes of our time is how the market share the networks went down but the revenues went up. Every year, the up front. Every year, the advertisers pay more and more for a smaller and smaller

audience. They had no choice. Now they do have choices.

Getting back to the economics. We basically have, you know, we have supply, a growing pool of supply, we had all the commercial content, both the stuff made now and the stuff made all over time. There's that pool supply, now growing because of the democratization of production. And then you have this demand. All these people who wanted not just what's been broadcast now but also the stuff that was broadcast last week, last year, ten years ago. And all those people who want the stuff that wasn't even broadcast at all. But we just couldn't measure it. So a huge expansion in supply, and a huge expansion in demand.

So where's the problem? It's in putting the two together. Now, anybody, any institution, and often those institutions are sort of broadcast mechanisms, that stands in between supply and demand, is going to run into trouble. Fox is an interesting example, they're on the supply side. They own content, they have a relationship with the content producers. But the affiliates are the bottleneck, what Steve Jobs refers to as orifices.

There is some road kill here.

There is indeed. So you know, the people who own the content, the people who can sort of catalyze more content, want to find a way to reach all this new demand. The problem is is that as you said, all the money is coming through these traditional channels. How do you manage to--

Well, one might argue that the affiliates, who are getting killed in this, are really not media businesses at all, they're distributors.

So...so it goes, you know. People--

I just gave a talk at the NAB, the National Association of Broadcasters in Las Vegas about the decline of the hit, and I hadn't actually realized, this is the biggest television conference of the year, and I hadn't realized that the B in Broadcasting means terrestrial broadcasting, and that most of the people there were radio engineers, brilliant people who basically built the incredible communications systems we have now, but their skill set is in sort of tuning signals so they can go out over-- and I'm thinking, you mean like rabbit ears? And I like, wow, that's the way the industry is still organized, around rabbit ears. And there's still a lot of regulation that's based around the ability for you to put up rabbit ears and get a signal and your constitutional right to do that is a lot of the screwiness of the regulatory...

Exactly.

Um, another fractionalized media business was magazines. And I think we're we're both old enough to remember Life and Look, which were the sort of networks of publishing. And that business got creamed and became special interest publishing, but something interesting happened out of that, which is the advertising was supported, mass market publishing went away, or went to television, but another kind of advertising that the trout fishing advertiser that advertises in a trout fishing magazine came in and created a whole parallel industry, and I think in some ways Google Ad Sense, and the application of technology to more rifle shot-- you know, what is an ad other

than a link? It's like, hey if you're interested in this, might you be interested in that. And I think that's in its infancy too, I still--

I agree.

Think that Google Ad Sense, which is the sort of Holy Grail of this thing is really the, you know, miniature Holy Grail, because there's so much more that can be done to try and be smart about. I think Amazon's book finding and book referencing engine which is based on a collaborative filter and is about ten times more interesting than Ad Sense, which tends to throw up stuff that appears to be relevant but really isn't.

I agree. You know, it seems to me, think about an ad can be defined as something you don't want. It's an interruption.

Yeah, it's a synonym for that!

But a marketing message that is properly targeted is content. And you know, often you'll find that, you know--

If you take a special magazine, take the ads out, the audience is less interested.

That's right. That's right.

You take the suppository ads out of the football game, that's okay.

So the, so you know what the...It's true. It's true. And if you think about it, you know, what's wrong with advertising on television is the notion of sort of keeping you from what you want by forcing you to watch a message for something you don't intend to buy. The problem is that you've got a one size fits all bucket. You know, you are willing to broadcast the suppository to a hundred million people to reach the two million you actually--

Yeah. Isn't there an old joke here, about ah...

But it's worse than that. It's not half that's wasted, it's 98% that's wasted.

So you're willing to annoy 98% of the population, and waste the money to reach that 2%, but if on the other hand if you put for example, if you know who that person is watching. Let's say you're distributing the Superbowl now in the internet, and you slot the ads in based on what your knowledge is of who the person is. How old they are, where they live, etc. Then that goes to-- rather than annoying people with ads they don't want, you're actually giving them things that have a much higher chance of being relevant.

I mean there's the tension here because I think this is what's going to happen, frankly. But I think there's an unintended consequence that we're going to live in a very monitored, Big Brother kind of world where people know more about you than maybe you really want them to know. And while it's all presented as, hey we're here to help, and you might like a coke, you know, there is a kind of creepy quality to knowing the last hundred tv shows I watched and...I mean I give that information to Amazon by virtually surfing there, so it feels harmless, but...

Well, I think there's going to be a choice. You know, I think fundamentally, you can sort of opt in, and your inclination to opt in will be based on how relevant the ads are. So you let Amazon track your behavior because you get value from it. You know, it's net positive. Because we probably trust them on some level.

Right. But I wouldn't want them to turn that over to the Bush administration to figure out if I'm reading the wrong kind of stuff.

Are you?

Yes! I am! That's the cause of my concern. But okay, let's shift gears a little bit, because I want to try and mine this time thing. Which again, I've never really seen anything like the quality of the stuff you presented tonight. But the other sort of time dimension. First one is evolution, change, how many changes, and I do want to come back to that, because I think we're also at the infancy of sort of figuring out what this new-- I mean, we're thinking of it as the new cheaper distribution mechanism, and enormous impacts take place. If you go from ten channels to a hundred channels, it's not a very interesting technological change, but it's a gigantic creative change. Now if you have something that is a genuine technological change, like interactivity, you're probably not doing a very good job-- I remember when I was working at a newspaper, when the computer first came out, the editor said, we can't really run a story, and I said, well people are buying them, this is a phenomenon. He said, ehh, find out what's the application. So I went around and re-interviewed all the people that I'd spoke to, and I said What are people going to use computers for? And we came up with filing recipes, and writing your own programs. So we didn't see desktop publishing, we didn't see-- we didn't even see word processing. Never mind the internet or email. So I think we're in that kind of early, pre- D. W. Griffith, where we're filming Broadway plays and calling that a movie. We haven't figured out close ups and camera tracking or any of that, but we'll come back to that. The thing I want to talk about is the archival dimension. Because going along parallel to your talk on this decay of hits, which is certainly quite true, is the loss of material. And again, I don't have an answer or a hitch, or a fund raiser that I'm doing, but I feel that, you know, this happens over and over again. Most of the silent movies are gone. You read about them, and somebody tells you this was a good picture, and you say, Gee out of curiosity I'd like to see it. Forget it, you know, when the people who have seen it die, it is gone. It never took place, and so...

It, you know, the, the, you know, the recognition that there is value in the archives is just the start. How to extract that value is really really tricky and we should probably talk about this for a few minutes because there are a lot of dimensions to this because there are a lot of dimensions to this, the questions begin to come up.

Okay, great.

There's a decay function over time. There should be, as I said, the decay function tends to be a parallel, tends to be a straight line, instead of-- you know, if we, rather than do film rank here, if you just turn this axis here into age, you find that you get this also this sort of plummeting effect. This pink bit right here is the value of an archive that's untapped. This is a really important issue right now. So as you know, MGM just sold its archive, there are a whole bunch of archives out there that everyone's assuming they

have x value. And that x value is based on existing distribution mechanisms. However, if you switch to abundant distribution systems, that value goes up. We've been running a kind of-- again, it's not good enough to publish, but we've been running analysis where we look at sort of the sales of things over time. The value of an archive sales. And draw a straight line. And then calculate what-- this amount right here is basically the difference between what an archive is currently valued at and what it would be valued at in a perfect world. If you're out buying archives, and there's a lot of people who are, and you do this analysis, and you realize that everyone is underbidding and you could bid more because you can find a way to tap that, you have a competitive advantage, and there's a big big sort of business school and private equity exercise going on right now in trying to do this analysis. The reason it's a little tricky is basically three things. One is the format. If it's in a-- you have to digitize archives traditionally that's costly. Sometimes it's degraded and you can't get to it. The second big issue is rights. Rights is the elephant in the room of the long tail. You cannot clear the rights to old stuff easily, especially the music. A famous case is that of WKRP in Cincinnati, which was a 1970s, possibly 80s, television show that was set in a radio station. There is demand for WKRP in Cincinnati out there, but the problem is, that throughout the entire show there's music of its era playing in the background. And the cost to clear all the music playing in the background of WKRP in Cincinnati is ruinous, and it has become the sort of case study as sort of the hardest nut to crack in all of television. And if you can find a way to clear the rights to WKRP in Cincinnati, you can clear the rights to everything. But we haven't, yet. And so we don't know how to tap that. I would imagine that the cost of clearing the rights in 2006 is higher than the cost of buying the rights when the show was made. That's right. They tried doing things like changing the music. And the problem is that the people who were really buying it for nostalgic reasons remember the music. And they're like, that's not WKRP in Cincinnati. So it's, you know, I, you know, the company person, legislator who can figure out how to clear rights on an industrial level, batch process, really really efficiently, is going to be able to transform this industry. Well, you've probably talked to and thought about Larry Lessing's views on the subject, so do you want to.. Yeah, this is interesting. So-- Give us Chris' view of Larry's view? Yeah, I'll try not to do violence to Larry's view. Larry Lessing is the Stanford University law professor who has been opposing the extension of copyright. Basically every year, or every ten years, copyright gets extended another ten years. This is largely to protect Disney's properties, Mickey Mouse and all that. Now Larry's view, and this is where I'm probably going to do a slight injustice to him, Larry's view is that older stuff doesn't have that much value, and therefore we don't need to protect its rights. Fifty years, forty years of copyright extension is enough. Anything beyond that,

that the sort of social benefit, of getting it out there so we can all use it, much as Disney used classic fairy tales that were in public domain to build its movies, that there's a value in just freeing it up, and at a certain point, you sort of say the value has been extracted, the money has been made on this property, and there's a social benefit in letting it out.

I'm very sympathetic to this point of view except for the fact that it runs squarely against the long tail. The long tails says, in fact, there is value in the archive, that we've been underestimating the demand for old stuff, not overestimating it, and that if you can only free it up you'll find that it has economic value, not just cultural value. So I think there's a way to square these two, and one of the-- and the problem with copyright law right now is that automatically is conferred, it's automatically extended whether people want it to or not.

What Larry has suggested, and others, is there's a sort of a diminimous one dollar renewal. You basically have to put up your hand and say, yes please. That's all you need to do. A penny. A penny renewal. And simply just saying, please renew it, that's enough, you know, you cared enough to have it renewed. The presumption is that 99% of the stuff, no one wants it renewed, and in fact maybe didn't want the copyright protection in the first place, it wasn't intended to have that kind of protection, and that most content would then fall into the public domain simply because no one cared enough to extend it. Yeah, it's a very mixed picture here. I mean, reading aside maybe the important question is social policy. But I think economically, Larry is wrong. There's lots of examples of archives becoming more valuable, you mentioned the MGM case, that was a library that was sold twice and considered valueless, sold to Ted Turner, he bought it for ten years, when he finished exploiting it it was considered valueless, and now it sold last year to Comcast and Sony, so it doesn't seem to be going down in value-- No. No, it's going up.

And yet the picture is getting older and older, and black and white, and so there's that problem. And then there's this other oddball problem of old books, I think we all know people or who have friends who have published a book that goes out of print, cannot get the rights back, and that seems like a tragic circumstance as well, where the rights are sort of-- it's kind of the rights problem in another shape or guise in the sense that something is imprisoned rights, or imprisoned content, rather than disappearing content. Exactly. Books are a fascinating example. The rise of the secondary market in used books has transformed the industry. So the traditional notion is that books go out of print, and then they're not available. But by simply networking all the used bookstores and sort of having them type in their inventory and then collecting that inventory in a single place, Librus is one company, it's a local company that does this, but Amazon lists used books right next to the new books. Basically, it has created a liquid market in used books that makes it so that nothing ever goes out of print. If it's not available at the top line, buy it new, it's available at the next line, buy it used.

The book is often in similar condition and the only difference is that the author doesn't get any money from it. When you buy it used, it's...you know, you pay the used bookstore, but nothing goes back to the author. And this notion of re-selling old books is great for our culture and for us as consumers in that we now-- out of print is out of fashion, out of print is no longer meaningful. But it doesn't solve the problem from the author's perspective, and you're right, that it's hard for them to get back the rights, and sometimes they don't even want to this is the interesting thing sometimes they don't even want to switch to print on demand.

Because print on demand books tend to be more expensive than new books, and a lot of authors say, if you make me a print on demand book, you're going to keep the book, you're going to keep it in your catalogue, it's now going to cost 50% more than it used to cost, and my sales aren't going to go up. If you would give it back to me, I would talk to a more creative publisher, and they would market it, and they would give it the audience it deserves. And you, by turning it into a print on demand book, are actually ruining my market. And it's a debate not yet solved.

I don't know about the dollar to renew, but I do think there ought to be some sort of principle and law that if I bought the rights to something, I own them and I tie them up and I'm supposed to be economically exploiting them, and I'm not going that, then I think they should revert, okay your time's up. You have to either keep paying me and keep-- I mean, what I hate to see is a film maker makes a movie, struggles to get the thing funded, and then can't hang on to any rights because in order to get the theatrical release, you've got to give up rights. And the contracts read, "on any planet, any universe, known or unknown, technology, invented or not invented," I mean these are incredibly broad wavers of rights, and you know great, if you want to exploit the rights to print my book on Frisbees, then print it on Frisbees. Well, I think one thing we can be sure of is that Congress will not solve this problem. So I think it's a great opportunity right now. I think this is an entrepreneur opportunity. We're in the right place for people to think of creative ways to route around this problem, offer economic incentives, technological abilities, demonstrate the demand out there so that the owners of these rights, the people who are keeping these sort of valuable cultural commodities locked up in warehouses, see the opportunity. See the way and the reason to get it out there.

Okay, well I'm going to dive into the questions here, because they're building up.