Digital Convergence -- or Digital Divorce?!
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Thank you for the invitation to share some thoughts about media with you tonight, and especially my thanks to our host and organizer of tonight's dinner, John Turner. It is ironic that John should ask me to speak to you on the topic, since if my newspaper has done a good job covering the trends, it is due in measure to the insights gleaned from my numerous conversations with John over many years.

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The invitations for tonight's event bore the title "Digital Convergence". The implicit presumption is that things are coming together, joining up, fusing into something new.

And in many respects, that is true. We see it every day. We have TVs, and we have PCs, and from a union of the two, we get Tivo. Likewise, the computer and the walkman beget the iPod. Television over mobile phones in on its way, as John mention in his remarks. The idea of "convergence" seems to make sense as a way to describe what is happening.

But when we look deeper, things are more complicated than that. As some things come together, they do so because other things are crumbling apart. So let me take a few minutes to talk *NOT* about "Digital Convergence" but instead about "Digital Divorce" -- about the myriad forces pulling things apart; about separation.

Specifically, I'd like to discuss separation in five main areas:
1. The use of media
2. The users of media
3. Who is media
4. The medium of media
5. The devices of media

In all five dimensions -- which I'll look at individually in just a moment -- things are splitting up as much as they are coming together. Or, in the words of Yeats, "Things fall apart; the centre cannot hold."

To understand what I mean by separation, or digital divorce, let me begin with an example. Consider telecommunications. It used to be that the entity that owned the network also offered the services over that network.

Think of AT&T (though this was the same in every market; British Telecom, France Telecom, etc…). AT&T had a national network, and it sold voice calls, based on time and distance. It was a monopoly, so whatever price it wanted, customers paid (in fact people weren't customers at all, but "subscribers," or "rate-payers"). It was a nationally-regulated monopoly, so it had the efficiency and service ethos of a government bureaucracy.

Now, take "voice-over-Internet Protocol," or "VOIP." What is VOIP but a separation of content

and conduit? The content is the voice call, the conduit is the network that patches that call together. VOIP is important because it represents a separation between the company offering service, and the owner of the network. This sort of separation leads to competition, and in turn, better service, lower prices and most importantly, far greater innovation.

What is critical is that VOIP isn't really about voice calls -- that's just the first thing that happens to be traveling over this separated platform of physical network and digital services. It is about treating voice as data. VOIP is important because once voice is treated like data and divorced from its channel of communications, one can do more things with it, and combine it with other data services (for example, real-time collaboration software among many parties).

This is what I mean by the forces of separation, or "Digital Divorce," that are shaping media today. Now, to look at each of the five areas individually.

I.

The first area of separation is in the use of media. The Internet is splitting up from a two-way (or multi-way) medium to a one-way medium. To be sure, people can do interactive things over the Net, and this will grow. But it would be wrong to focus on this, or place too much emphasis on this capability.

Many users prefer to be passive before the Internet. We are all lazy by nature (journalists especially more so than business consultants!). And much has been said of data that show that people are decreasing their television viewership in favor of spending time online. As such, the Internet is increasingly taking on the characteristics of television. Indeed, it is also technically metamorphosing into television, by way of "Television over Internet Protocol." As this happens, it becomes more of a one-way medium than we otherwise give it credit.

In fact, this isn't actually very new, though we all tend to still believe the myth of the Internet as a ganglion of users all interacting, rather than the reality of what the Internet looks like today, as a hub-and-spoke system -- or if you will, a broadcast media. The way Internet traffic works is a single mouse click sends a few digital bytes to request something, and back comes a flood of music and video and text. In this regard, the Web already resembles a one-way medium -- that's why we need big server farms to handle the traffic load. And clicking on a Web link isn't really interactive -- it's called changing the channel! Web sites make forums and chat rooms available for people to use -- but the vast majority don't use them. They prefer to be relatively passive before the medium.

The Internet *IS* interactive, in that it has the potential to let people be interactive. But the way it is used by most people most of the time, is as a passive, one-way medium. We can't hold to the same assumptions of usage and traffic patterns as before.

However, this notion of marrying a passive medium with the ability of users to control the content they receive is profound: it changes the way people interact with media. Specifically, the Internet is an immediate, self-controlled medium. As such, though the Internet is becoming increasingly a one-way medium, the most striking change is that it is destroying the notion of "reservation media" -- the era when people used to wait for a show to go on at a specific time, be it a TV sitcom or talk-radio.

Tivo changes this, but the Internet is changing media habits even more. This will likely among its most profound legacies. Some programming may still be based on specific times; of course, live

events will be. But the notion of “reservation” media will be anachronistic. It will be as alien to our children, the next-generation of media consumers (and producers) as turning a crank to listen to a gramophone.

II.

The second area of separation is in the users of media.

Let me explain what I mean by this, by posing a simple question: Is the Internet a mass medium? (Of course, by asking such a seemingly evident question, it is obvious that I’m going to take a contrarian view!)

The answer is “no.” The Internet is *NOT* a mass-medium. On the contrary, it is a niche-medium, and niches of niches. There is a separation of audience, the users of media, that is often underestimated when we think of the Internet as media.

"Your Internet is not my Internet -- but everyone’s TV is the same." By this, I mean that what you do online may be completely different than what I do. That degree of highly customized activity makes it less a medium aimed at the masses, but extremely narrow classes. Television, on the other hand, has typically been the opposite -- note the water-cooler conversations the morning after popular sitcoms air. (Admittedly, modern TV itself is getting so many channels that it, too, is becoming stratified….)

This idea comes from a wonderful expression I learned from the journalist Michael Elliott of *Time* magazine (and formerly of *The Economist*): “Your London is not my London, but everyone’s Chicago is the same.” By that, he meant that I may spend all my time at West End theatres, you may never leave Notting Hill, and John Turner might only be found at Indian restaurants on Brick Lane -- our relationships with the same city are totally different. In places with less diversity, like Chicago (or, if you will, network TV), everyone’s experience is roughly the same. The Olympics are an even better example: Some people live for figure skating, others can’t stomach it and only watch the luge. Some people, I’m told, watch curling.

The Internet is like this -- and it has big implications for the future of media. Modern media is characterized by finely-customized, tailored communities-of-interest. There is not one single mass-media, but many. It is a medium that is niche-ified. Segmented. Targeted. And this, of course, effects not only the content but the ads.

III.

The third area of separation is between who is media and who isn’t.

By this, I mean content-creators such as the press, as well as the film studios and recording labels. Concerning the press, the separation is between who is a journalist versus the vast army of bloggers. For the entertainment industry, the issue is who constitutes a studio filmmaker versus an ordinary person making films, and who is a signed recording artists versus a cacophonous garage band. In each of these sectors, the lines are blurring between the professional and the amateur, which is something new media makes more possible. Also, the consumer of media is becoming a producer of it.

Regarding blogs, there has been a big controversy over what constitutes a “real” journalist compared to simply individual writings. Why should the distinction matter? For two reasons.

First, on a vain level, journalists are looking over their shoulders at bloggers and are worried because either they point out the press's flaws -- or may one day *become* the press. (So the distinction matters to us!) Thus, there is an obvious incentive to demean blogging, be it for reasons of self-idolatry or self-preservation.

A second reason the distinction matters is because laws that protect the fourth estate -- such as from being compelled to reveal confidential sources or from libel -- never anticipated their application to ordinary individuals. They are based on public-interest grounds due to the press's wide reach -- yet with blogs and the Internet, this reach is no longer exclusive to what we would classically consider media companies. Courts are struggling with the conundrum,

In terms of media more broadly, blogs are important to understand because they represent a form of user-generated content, and this form of content creation will probably become more prevalent. Today it is mostly text, and mostly news-related -- but it won't be just this in the future.

Moreover, the influence of the bloggers relative to the mainstream media is more significant than many people fully understand. In the category of political information, the top bloggers have had days when they received more traffic to their sites than newspapers like *The New York Times* or *The Washington Post* had readers of their op-ed pages. On an average day, their viewership rivals the op-ed page readership of any major metropolitan daily newspaper in America. That is an incredible fact, and forces us to reconsider the way we think about blogs and their influence.

Reach is only one part of the equation. As for the influence of blogs, there are signs that it is substantial. It forced Dan Rather, one of America's biggest television journalists, out of his job. After CBS broadcast documents last fall that purported the show that President Bush had failed to uphold his obligations as a national guard reservist, bloggers voiced doubts about the veracity of the evidence. In the midst of the scandal, a former CBS executive, Jonathan Klein, appeared on Fox News, saying: "these bloggers have no checks and balances…. You couldn't have a starker contrast between the multiple layers of checks and balances and a guy sitting in his living room in his pajamas writing."

We all know how the incident ended -- the pajama party was proved correct, and Dan Rather was forced to retire a year earlier than he had planned. The incident underscores how media is separating in regards to who is a user of media, from consumer to creator. And this is muddying the differences between who is a journalist from who isn't.

This would be interesting if it were just happening in the press, but there are a lot of signs that this separation is starting to happening in entertainment, too (though it is still early days). In the area of film, there is something called "machinima," which is a cross between the word "machine" and "cinema." It refers to people who are creating movies by recording the sequences of video games -- like Grand Theft Auto or Halo -- making the "actors" do things according to a script, completely unrelated to the game, and adding voiceovers.

Some of it is extremely good -- I'm hooked on something called "Red vs. Blue," which is made by four guys in the US Midwest, who actually quit their day-jobs when the show took off. They now do it full-time -- there are a variety of revenue streams -- and release new shows every fortnight. They are on their third "season."

The point is not that this is going to destroy Hollywood -- not at all. Only that this is happening, and will surely grow. The fantasy of the garage band that makes it big -- like Buddy Holly and the Crickets -- is deep set in the mind of media consumers. But easy access and low cost of media has

made user-created content more possible, and thus begun to separate established formal media from a more informal variety.

For example, in library science, there is gray literature -- material that exists in between mainstream publications and things that are done by individuals and untraceable, like a post-it note. What the Internet is doing is allowing the vast area of grey literature to be made accessible. As a result, its spectral-contrast is changing, becoming a little bit more white than black on the scale.

Let me conclude this aspect of separation with a final note about blogging. I mentioned that some bloggers get more readers than *The New York Times*, yet the mainstream media thinks of them as unemployed twenty-somethings on their laptops at Starbucks. That is not true. Blogging is an important phenomenon, and the reality of bloggers is different than the myth.

The reason is because though there may be millions of bloggers, the majority of traffic goes to just the very top handful. The relationship of blogs to traffic follows something called a "power law" or "Pareto distribution." This refers to a statistical situation where there is a ferocious winner-take-all pattern -- where differences are exponential, not simply linear. (Vilfredo Pareto was an Italian economist in the early 20th century. The pattern was first used to explain income distribution -- it doesn't look like bell curve with a big middle class and some very rich and very poor on the fringes. Instead, you have a few billionaires and a billion people living on $1 a day. On a graph, it looks like a big spike that shoots down almost to the very bottom, then a small curve, and then a very, very long tail jutting out along the X axis, hovering just above zero.) Thus: a million teenage girls with blogs that no one visits along the long tail, and one blogger like Glenn Reynolds of Instapundit.com, who has received as much as a half-million readers a day, at the very top of the spike. That's a power law. Incidentally, this traffic pattern exists for almost every sub-category of online information, as well as the Web as a whole.

This is important because when we consider blogging and mention "the guy sitting in his living room in his pajamas," we're completely missing the point. It is like talking about the significance of the printing press and considering inter-office memos, not major newspapers or books. To understand blogging, it is essential that we realize that though there are millions of people doing it, the vast, vast majority of traffic are dominated by the top few blogs -- they are akin to major media. In fact, the audience concentration is similar to offline media: the top 100 blogs account for 75% of all blog traffic.

Moreover, they are not in pajamas, either. According to research from the political scientist Matthew Hindman, of the top bloggers and top columnist for national newspapers in the US, the columnists have generally gone to slightly better colleges compared to bloggers, who generally have gone to very good schools just one rung below Ivy League. However, bloggers are twice as likely to have a graduate degree, and often a PhD. So bloggers are generally better credentialed than the mainstream media. What this suggests is that we must dismiss the unfair image of bloggers as the freakish loner. Most of them probably are -- but the ones that count, are not.

Finally, what does this power law mean for media? According to Chris Anderson, a former writer at *The Economist* who now edits Wired magazine, it leads to something he calls "The Long Tail." This is the idea that the Internet has created unlimited shelf-space for all digital products -- nothing goes out of print, and with new directories, it is now easy to find. The idea of scarcity in media -- "I'd give my left arm for a copy of Prince's 'Raspberry Beret'!" -- is over. This will have a major impact on the business models of digital media, that are just now being worked out.

IV.

The fourth area of separation is in the medium of media. The mechanism of the Internet as a conduit for how to get content will separate.

Let me start by asking another question: Will people get their movies and music from the Internet? (Again, with such a contrived question, you can obviously tell how I plan to answer!) No -- the Internet probably won't be the way people get their movies and music.

The reason is because as storage becomes cheaper than bandwidth, and when you think of the high amount of bandwidth people will need to consume, it becomes clear that it may make more sense to sell boxes that already contains the content inside of them, and use the Internet as a payment vehicle to cryptographically unlock the content stored in the digital box. In this case, the Internet is used as a payment and access vehicle, not for content distribution.

Also, content will probably be sold on a subscription model, on an unlimited, "all you can eat" basis. This, provided content producers (such as film and music companies) and aggregators (libraries, Google, etc.) agree to common standards for digital rights management, and agreed upon business models. Importantly, their interests aren't the same.

Subscription models make sense because the alternative that we have today -- where we're all database managers, having to figure out our iTunes and iPods -- doesn't work very well. We want a jukebox, and shouldn't need an engineering degree in order to twist and shout. The "all you can eat" model also makes sense. Other areas of media are moving in that direction. Consider telecoms, where mobile phones in the US, as well as increasingly, fixed-lines, are moving towards an unlimited-use subscription model. In the late 1990s, it was noted that 40% of the price of a phone call was accounted for by the cost of measuring, metering and billing for it.

People are willing to pay for media -- not steal it off of peer-to-peer networks -- if it is easy to use, reliable, secure and inexpensive. People will even be willing to pay more for convenience. Again, think about telecoms -- every one of us knows that we can have free international phone calls. We can use Skype or another VOIP provider. Bruno Giussani, a writer and friend, recently penned an op-ed about Skype in the Wall Street Journal Europe, and encouraged me to sign up. I told him that I already have free phone service. He said "What are you talking about -- you pay BT 30 pounds a month?!" And I replied: "Yes, but you know what?, I never feel it -- 30 pounds for all my calling needs is essentially free." I think there are a lot of people like us around. If something is priced low enough in relation to the value we derive, many people will consider it free. Or perhaps: "free enough."

So as for digital media: will I pay 10 pounds a month to get any song, any time I want? Maybe. I probably won't pay 100 pounds a month. That's a good spread, between 10 and 100 pounds: let the negotiations begin!

The unlimited-use subscription model particularly makes sense when we remind ourselves that we're talking about an intangible good. As digital content, music and movies are in economic terms "non-rivalrous," in that your use doesn't interfere with mine. This is because of the separation of the content (the song) from the form (the cassette tape). In physical form, of course, media *is* rivalrous -- which shows to just what a degree computers and the Internet is changing the economics of media. And as the idea of "The Long Tail" suggests, now, the shelfspace is unlimited.

As a result, the era of taking something ephemeral like music, and rendering it tangible in a vinyl record or plastic CD, and selling it that way, is utterly over. (So is, to some extent, the monopoly on the aggregation-function of music labels in identifying new artists -- the vaunted Artist & Repertoire man -- and maintaining catalogues and music libraries, in an era of online directories, search engines and niche web sites.)

Just as voice-over-Internet Protocol marked a separation of the content from conduit, so too is media separating from the different mediums in which they had been instantiated.

V.

This leads me to the fifth and final area of digital divorce: device separation.

The PC will not be the center of home entertainment, but appliances will emerge that act more and more like computers. They'll have memory, and PC-like interfaces, with a screen, user software, etc. But they won't be computers per se, since PCs are too difficult to use. Instead, we will centralize around general-purpose, multi-use devices. Not a video game console in one corner, a Tivo in another, a DVD player in a third and a stereo in a fourth -- that makes no sense. In fact, this is already happening: Microsoft's game console X-Box seems aptly-named, for what is it but just a scaled-down computer? An "anything-Box" (and indeed, within days of its release, hackers had found a way to install the Linux operating system on it, to use as a cheap PC).

The importance of a computer is that it is extensible, flexible: users can add new features at very little marginal cost by installing new software. We don't have a word processor on one part of our desk and a spreadsheet system on another, and email on a third… so why should we presume it will be any different for home entertainment in the digital era?

Furthermore, the debate over "integrated suites" versus "best of breed" systems is moot -- it will be integrated into one, just as record players, amplifiers and tape decks once were sold separately and then integrated together. Now, the notion of the stand-alone stereo won't exist in the future, except for the dedicated audiophile, a statistical outlier, in the same category as the buyer of luxury cars and mechanical watches.

This will happen, alongside a separation of body and soul for entertainment devices. That is, just as computers quickly evolved to separate the screen from the brains, or the "tower," so too will digital entertainment devices have better, and single interfaces, for many functions. Components will be separated, like a supernova in the living room. Flat TV screens will be placed on any wall, or with high-quality projection any bare wall will be a screen. Speakers will be wireless, too, so sound can come from anywhere.

In this world, the key question will be: who has a rapport with the customer? Will it be the software company, as Microsoft does in personal computers? Or the hardware maker, as Nokia is trying to do with mobile phones? Or, the network service provider? Telecom operators have the sunk cost of an expensive billing system that, as we know, could be obsolete in a unlimited-use subscription world. Yet they know the bank details and home addresses of their customers. They'd love nothing better than to leverage their legacy billing infrastructure to serve as the payment operator for commerce over a network, be it TV, the Web or mobile phone.

Thus, the question is: where are the bottlenecks? Because where there are bottlenecks, there are opportunities, and money to be made. Whether it is at the level of software, hardware, applications or network services, the company that can find itself the gatekeeper not only controls

the customer experience, but can effect what its technical suppliers and business partners do, and monetize the ability for those firms to reach those customers.

What is clear, though, is that there will have to be device neutrality, and compatibility among systems. Consumers, satiated on the treats of the Internet's interoperability, and outraged at non-compatible systems, will rebel at anything less. It is not a generally good business strategy to anger your customers, and I think over the long term, entertainment companies will learn the long, hard lessons of IT equipment makers, and make their products more open the closed.

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Well, I've made many declarative points this evening. But what all this points to is how little we really know about what the future will look like. It is easier with hindsight, and luckily, we have the past to inform us in the present, as we seek to build the future.

So to conclude, let me end with where I began -- with AT&T.

AT&T was once the biggest company in world. In fact, AT&T was the lovechild of convergence, but of a different era -- convergence between the telegraph and telephone. It's very corporate name -- the American Telephone & Telegraph Company -- is itself evocative of this convergence. Yet AT&T never delivered a telegram in its life. Alexander Graham Bell knew that the same wires that transmit calls could be used for Morse Code messages, and so he set up his company to act as a carrier for it.

The lessons here are three-fold.

First: The telephone won. One generation of technology might kill another generation of technology. Convergence might mean winner and losers -- so be wary.

Second: Leveraging previous infrastructure is a good way to enter a new technology revolution. "Disruption" is subtle, incremental -- it is not overt, until its over!

In the late 1800s, Western Union, the telegraph company, was the biggest company in US. It rejected buying the Bell Patents in the 1880s, calling the telephone "a parlor trick." Thirty years later, the Bell Telephone Company bought Western Union! It was regarded as a watershed moment in American business -- used at the time as startling evidence that the world was speeding up, indeed had irrevocably changed.

Third: It might take a long time for the future to arrive. There is a persistence of legacy technology that one shouldn't underestimate. For example, the British Admiralty used Morse Code as a back-up for ship communications until as late as … the year 2000!

If there is a fourth lesson, it is this: Winners are not secure; no one is safe. AT&T was acquired this year for $16 billion, ending its life as an independent company.

And with that, I'm sure that we'll have a lot to talk about in the discussion….

Thank you.