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THREE

RO, EXTENDED

There's a part of culture that we simply consume. We listen to music. We watch a movie. We read a book. With each, we're not expected to do much more than simply consume.* We might hum along with the music. We might reenact a dance from a movie. Or we might quote a passage from the book in a letter to a friend. But in the main, this kind of culture is experienced through the act of consumption. There's a beginning, a middle, and an end to that consumption. Once we've finished it, we put the work away.

This is the stuff at the core of RO culture. And while of course the stuff was not born with the “infernal machines” that Sousa lamented (in our tradition it was Gutenberg who gave birth to the most significant spread of tokens of RO culture), my focus for the moment will be on the RO culture that Sousa did lament: the tokens of RO culture that get processed and performed by machines, capturing and spreading music, and the spoken word, and eventually, images and film.

* Of course, as Candice Breitz and many others argue, there's nothing “simple” in consuming, but put those complications aside for the moment.

For most of the twentieth century, these tokens were analog. They all therefore shared certain limitations: first, any (consumer-generated) copy was inferior to the original; and second, the technologies to enable a consumer to copy an RO token were extremely rare. No doubt there were recording studios aplenty in Nashville and Motown. But for the ordinary consumer, RO tokens were to be played, not manipulated. And while they might legally be shared, every lending meant at least a temporary loss for the lender. If you borrowed my LPs, I didn't have them. If you used my record player to play Bach, I couldn't listen to Mozart.

These are the inherent—we could say “natural”—limitations of analog technology. From the consumer's perspective, they were bugs. No consumer ever bought a record player because he couldn't copy the records.

But from the perspective of the content industry, these limitations in analog technology were not bugs. They were features. They were aspects of the technology that made the content industry possible. For this nature limited the opportunity for consumers to compete with producers (by “sharing”). And its imperfections drove demand for each new generation of technology. Record companies thus sold bits of culture, embedded in vinyl records, then in eight-track tapes, then in cassette tapes, and then in CDs. With each new format, there was a wave of new demand (often for the very same work). The same with film. Film companies distributed films to theaters, and then films to videocassettes, and then films to DVDs. The business model of both these distributors of RO culture depended upon controlling the distribution of copies of culture. The nature of analog tokens of RO culture supported this business model by making it very difficult to do much differently.

The law supported this business model. The law, for example, forbade a consumer from making ten thousand copies of his favorite LP to share with his friends.¹ But it wasn't really the law that mattered most in stopping this form of "piracy." It was the economics of making a copy in the world of analog technology. At least among consumers, it was this nature of the LP that really limited the consumer's ability to be anything other than "a consumer."

Nature Remade

Digital technology changed this "nature." With the introduction of digital tokens of RO culture and, more important, with the widespread availability of technologies that could manipulate digital tokens of RO culture, digital technology removed the constraints that had bound culture to particular analog tokens of RO culture. As I've described in a different context,² we could say that while the *code* of an LP record protected it from duplication, the *code* of a digital copy of that record does not. The *code* of an analog video-cassette effectively limited the number of times it could be played (before the tape wore out, for example). The *code* of a digital copy of that film does not. The "natural" constraints of the analog world were abolished by the birth of digital technology. What before was both impossible and illegal is now just illegal.

When the content industry recognized this change, it was terrified. Digital tokens of RO culture would no longer conspire with the content industry to protect that industry's business model. Unlike analog technologies and analog tokens of RO culture, digital technologies would instead conspire with the enemy—at least, the enemy of this particular business model. By the mid-1990s, the

industry came to fully recognize this enemy. By the late 1990s, it had hatched a strategy to fight it.

And thus were born the copyright wars. In September 1995, the content industry, working with the U.S. Department of Commerce, began to map a strategy for protecting a business model from digital technologies.³ In 1997 and 1998, that strategy was implemented in a series of new laws designed to extend the life of copyrighted work,⁴ strengthen the criminal penalties for copyright infringement,⁵ and punish the use of technologies that tried to circumvent digital locks placed on digital content.⁶

This legislation was soon complemented by aggressive litigation. First the lawyers targeted commercial entities like MP3.com and Napster.⁷ Then they targeted ordinary citizens, charging them with downloading music or enabling others to do the same.⁸ The federal system was flooded with claims based upon federal copyright law. According to one site that monitors lawsuits filed by the Recording Industry Association of America, as of June 2006, the RIAA had sued 17,587 people, including a twelve-year-old girl and a dead grandmother.⁹ A year later, the RIAA had sent around 2,500 prelitigation letters to twenty-three more universities across the nation, threatening action based upon students' allegedly illegal downloading of copyrighted content.¹⁰ These aggressive legal threats have coincided with a 250 percent increase in copyright litigation in the federal courts in six years.¹¹ A similar pattern has spread overseas. The International Federation of the Phonographic Industry (European cousin to the RIAA) reported suing more than ten thousand people in eighteen countries by the end of 2006. It promised many more suits in 2007.¹²

By the turn of the century, the industry's view had become simple and dire: As never before (at least since the last time),¹³ the content industry was threatened by new technologies. And unless

the government launched a massive effort to regulate the use and spread of these technologies, the rise of digital technologies would mean the fall of much of the content industry.

The numbers then were at least consistent with the content industry's argument: By the first half of 2002, world sales of recorded music had fallen by 9.2 percent in dollar value, and unit shipments were down 11.2 percent. Worldwide, the recording industry suffered its third straight year of declining sales. Sony told investors it expected music revenues to fall an additional 13–15 percent in 2003: "In the United States, sales had also declined steadily over the previous three years, with sales of recorded music falling 8.2 percent in dollar value and 11.2 percent in unit shipments."¹⁴ The labels blamed "piracy" for "an estimated \$5 billion loss in 2002" alone.¹⁵ More recent statistics are, if anything, worse.¹⁶

Most in the industry—at least circa 2002—believed that "piracy" was unavoidable given the "nature" of digital technologies. Most thus believed the industry faced a choice: drive digital to the periphery and save the industry, or allow it to become mainstream, and watch the industry fail.

Re-remaking Nature

Then Steve Jobs taught them differently. For at the height of the frenzy of this war against "piracy," Jobs demonstrated in practice what many had been arguing in theory: that the only *nature* of digital technology is that it conforms to how it is coded. The technologies of the Internet were originally coded in a way that enabled free, and perfect, copies, that nature could be changed by a different code, with different permissions built in. Thus, digital

tokens of RO culture could be recoded with at least enough control to restore a market in their distribution. That market could, Jobs demonstrated, compete effectively with the “free” distribution of the Internet.

The iTunes Music Store was the proof. Launched in 2003, more than 1 billion songs were downloaded within three years, 2.5 billion within four.¹⁷ And while iTunes music was digital, iTunes tokens of digital culture contained a technology to limit their (re)distribution. Code (called FairPlay, a kind of Digital Rights Management, or DRM technology) was used to remake the code of digital tokens of RO culture. This remade code was enough to get a reluctant content industry to play along.

Apple’s iTunes wasn’t the first to embed DRM in content.¹⁸ It was just the smartest. Jobs understood that the record companies would demand some control. The success of iTunes (and more important, of the iPod conveniently tied to it) came from the fact that “some control” could be less than “perfect control.” You couldn’t *easily* spread iTunes content to everyone on the Web—though if you hunted around a bit on the Net, you’d find all the code you could want to liberate iTunes. DRM was just a speed bump: it slowed illegal use just enough to get the labels to buy in.

I’m not saying it was Jobs’s genius alone that brought the content industry around. An important legal lever was being deployed at the same time in the Napster case. Recall that the record companies had sued Napster because of the “piracy” it enabled. Napster had countersued the record labels, charging that they had an agreement among themselves not to sell content to the digital platform.¹⁹ The labels needed cover from this charge, and an experiment with an operating system holding no more than 5 percent of the market seemed safe enough. Thus was iTunes born.

But whatever the motivation, or the mix of motivations, iTunes' success supported the idea that a wide range of content might be sold digitally on the same model that defined the content industry of the twentieth century: by metering the number of copies sold. iTunes quickly expanded its offerings to books, then music videos and TV shows, and, finally, movies. Others followed a similar path—offering different models for selling culture, but all still *selling* culture nonetheless. eMusic convinced independent labels to sell downloads without any DRM. Rhapsody sold DRM'd downloads in a subscription model. The key with each successful example was to find a balance between access and control that would satisfy both the consumers and the creators. This mix of models soon convinced a skeptical industry that RO culture had a twenty-first-century future. And soon into the century, there was a revival of investment to find ways to better spread and exploit an RO market in a digital age.

The potential is not hard to envision; the businesses are just beginning to emerge now. If the twentieth century made culture generally accessible, the twenty-first will make it universally accessible. As the cost of inventory drops, the mix of inventory increases—the lesson of the Long Tail, which we'll consider more in chapter 6. As the mix increases, the diversity of culture that can flourish in the digital age grows. Think of all the books in the Library of Congress. Now imagine the same diversity of music, video, and images. And then imagine all of it accessible, in an instant, by anyone, anywhere. No doubt there are lots of hurdles to overcome to get to this world. But the hurdles are not technical. As we'll see in chapter 9, they are just regulatory. And if these regulatory burdens can be reduced, a new industry of RO culture can flourish. A hundred years from now, if it is allowed to flourish, we will see its relation-

ship to the twentieth century as we see the relationship between the Boeing 777 and the work of the Wright brothers or Alberto Santos-Dumont. This is the extraordinary potential for RO culture in a digital age.

Recoding Us

As these businesses grow, they change not only business. They also change us. They change how we think about access to culture. They change what we take for granted.

For example: during the twentieth century, our access to television and movies was different from our access to books. With television and movies, the viewer had to conform his schedule to the schedule of the distributor. So much was required by the technology; so much came to seem natural. “Channels” were tools to *channel* people into watching one mix of content rather than another. A smart scheduler tried to keep an audience by varying the mix so as to prevent the “viewer” from wandering to another channel.

During the same period, however, books were accessed differently. With books, the “natural” expectation (in the twentieth century at least) was that the content was accessible on our schedule. When we walked into a library, we expected to get what we wanted, then. If the library didn’t have it, we expected it to get what we wanted relatively quickly through interlibrary loan. If a librarian had told you as you entered the library, “I’m sorry, in the afternoon we offer only nonfiction. If you’d like to read some fiction, come back after five p.m.,” you would have been incensed. The idea that the library gets to say when and what I read is outrageous. Or put differently, it would have been considered outrageous for any

library or bookstore or publisher to exercise the same control over access to books that television stations and film distributors exercised over film and video.

In the twenty-first century, television and movies will be bookified. Or again, our expectations about how we should be able to access video content will be the same as the expectations we have today about access to books. The idea that you would conform your schedule to a distributor's will seem increasingly ridiculous. The idea that you would have to wait till "prime time" to watch prime television will seem just fascist. Freedom will mean freedom to choose to watch what you want when you want, just as freedom to read means the freedom to read what you want when you want. In both cases, not necessarily *for free*. But in both cases, according to your schedule, not the schedule of someone else.

We can see this most clearly in our kids, who think it "just dumb" that an episode of a favorite TV series is not available whenever they want to see it. And even older sorts begin to understand this sense, as the DVRs like ReplayTV and TiVo become increasingly common. More and more, even to old folks like me, it seems astonishing to remember a time when to watch a television show, you had to synchronize your schedule to the schedule of the broadcaster. Absurd that if you missed an episode, that was it. There was no chance—at least that season—for a repeat.

The expectation of access on demand builds slowly, and it builds differently across generations. But at a certain point, perfect access (meaning the ability to get whatever you want whenever you want it) will seem obvious. And when it seems obvious, anything that resists that expectation will seem ridiculous. Ridiculous, in turn, makes many of us willing to break the rules that restrict access. Even the good become pirates in a world where the rules seem absurd.

I saw this dynamic in myself with the 2007 Academy Awards. For weird and accidental reasons (meaning, I don't hang out with movie stars), I had two friends nominated for an Oscar in 2007. I was thus desperate to watch the awards. But that year, I was on sabbatical in Germany, and not desperate enough to get up at 3 a.m. to watch hours of Hollywood self-promotion. So I programmed a VCR to record the show, and went to bed expecting to awaken and watch the results.

I'm not a technical genius, but I'm also not an idiot. Nonetheless, as seems always to be the case, the VCR didn't record. So though I could read that both of my friends had indeed won Oscars, I was extremely disappointed that I couldn't watch them win.

My first reaction was to turn to the Web site of the Academy Awards. The site had fancy advertisements that changed with every click you made, and tons of content. They must, I thought, have video of the awards ceremony available to be streamed. It's 2007, I thought. And the Academy Awards ceremony is a wasting asset: while many will care about the program in February 2007, almost no one will care in March.

But the site didn't have the actual ceremony available for free (or "free," since all content on the site was run with ads surrounding it) or even to purchase. So I turned to iTunes, willing to pay whatever it would charge to download the awards ceremony. But again, no luck. iTunes didn't have it. I then extended my search to a number of other obvious places where the program might be for sale. Yet again, no luck.

So then I did something I just don't do—I went to YouTube to see who might have at least clips that might show my friends accepting their awards. Within five minutes, I had found clips with both friends, which I watched with utter joy.

Many people did the same as I (though I take it not for the same reason). And many took those clips and blogged them—adding commentary, or criticism, or praise for the works celebrated at the awards. I did too, adding links to the YouTube clips on my blog in an entry the next day bragging about my Oscar-winning friends. But then I read about legal action being initiated against bloggers and YouTube users who had distributed parts of the awards. And while, as a lawyer, I understood precisely the claim the content owners had, as a citizen of the twenty-first century, I was still astonished. Though this instinct can't be justified as a matter of (at least today's) law, it is the essence of practical reason in the digital age: if you don't want your stuff stolen, make it easily available. YouTube is a picture of unmet demand. And indeed, when I've tried to find clips of important breaking news on YouTube, the only times I've failed have been when the content provider has made the same content available on its own site. Access is the mantra of the YouTube generation. Not necessarily free access. Access.

Digital technologies will thus shift the expectations surrounding access. Those changes will change other markets as well. Think of the iPod—perfectly integrating all forms of RO culture into a single device. That integration will increasingly lead us to see the device not as music player, or video player, but as a universal access point, facilitating simple access to whatever we want whenever we want. Many devices will compete to become this device. And that competition is certain to produce an extraordinarily efficient tool to facilitate, and meter, and police our access to a wide range of culture.

This change, in turn, will change other markets as well. Think about a hotel room: at high-quality hotels, there is now fierce competition to provide extremely high-quality televisions. *Why* is

beyond me. What chance is there that in the thirty minutes I have before I go to sleep I will find something just starting on the 150 channels the hotel provides that I actually want to watch? From my perspective, at least, this \$2,000 flat-screen television is a useless suck of space in a hotel room.

But as the universal access devices I've described get perfected, the same competition that drives hotels to spend thousands to give me beautiful access to the shopping channel will drive them to provide a simple way to connect my access device to their projector. Count on a future of simple docking devices that amplify or project content accessed through an iPod-like device. Hotels (and restaurants, airplanes, and bars) will then focus on supplying great infrastructure. The iUser brings the content.

Users will thus demand access at any time, to everything (think: Library of Congress). And technologies will develop to provide or meter or police that access (think: the iPod, 2020). But then which of these three models for access will it be? Will these devices simply provide access, either by simply holding the content, or by enabling the user to tune into a particular channel? Or like a jukebox, will they meter access, deducting a fee for every download or play? Or like a soldier at a military base, will they monitor the content being accessed, and block access without the proper credentials?

The easy, and to some degree true, answer is that they will do all three. But the interesting part is how significant the first of those three will be, and how insignificant the third. My sense is that digital technology will enable market support for a much wider range of "free" content than anyone expects now (where "free" simply means without charge); and digital technologies will continue to resist models that depend upon the heavy policing by its owners to protect against "unauthorized use." The quick disappearance of

DRM for music is evidence of the latter point.²⁰ I, however, want to focus here on the former.

The model for commercial broadcasting in the twentieth century was ad-supported “free” content. The limitations of the technology of the twentieth century restricted the ways in which ads might support free content. Programs were interrupted. Ads that roughly matched the demographic of the program’s audience were broadcast. In a world of relatively few channels, those ads had sufficient penetration to make them pay (both the networks and the advertiser).

The limits in that technology are obvious: The advertiser has to broadcast to a wide range of people; the ability to target ads is relatively weak. The advertiser can’t really know who saw the ad or what they did when they saw it. And the advertiser is constantly aware that his message is viewed as an intrusion. When ads came every thirty minutes or so, for many, they were a welcome break. But when 25 percent of broadcasting time is advertisement, they are a perpetual annoyance. (Indeed, at this frequency, you can begin to understand why there’s a market to buy “free” TV: if eighteen minutes of every hour is advertisements, then even if you value your time at the minimum wage, it would pay to spend \$1.99 to avoid watching the commercials.)

But just as the limitations of analog RO culture were eliminated by digital technologies, so too the limitations of twentieth-century advertising can be eliminated by twenty-first-century digital technology. And as the lessons of this change get spread, content providers will increasingly recognize that free access pays. Free access is a means to gather extremely valuable data about the viewer. That data can translate into much more effective advertising techniques.

The point is obvious when you think about Amazon. Amazon

knows me intimately because it watches me more carefully than does any thing or person in the world. No one could pick a better list of things I'm likely to want to buy. That's because Amazon sees what I buy. It learns from the patterns of other customers what the sort who buys as I do is likely to want to buy next. It has built a thick profile of my preferences. And I'm very happy to listen to it when it suggests something I might be interested in.

So imagine a network with the same data about you. (I know, privacy alarms are going off, and that's an important issue of course, but it's not the issue for this book.)²¹ Imagine that by watching all the YouTube clips you browsed through or the shows you actually paused to watch, the network began to build a profile of your preferences as rich as Amazon's. And as it developed this profile, this network could now market more effectively than any network today. Access is what produces this value. Limiting access limits it.

This third point will be recognized soon, and not because dweeby professors write about it. That's the great thing about markets: there's never a need to lecture a competitive market. Markets are driven to find value through competition with others. No doubt, every age will be marked with battles waged by the previous generation's giants. But the giants always fall to a better way of making money. And the RO culture that digital technologies will support will provide lots of new ways for content producers to make money. "As if by an invisible hand," this market will radically change the nature of access to culture in the next ten years. As a result, our children will be unable to understand a world where Thursday at 10 p.m. was more significant in cultural terms than Friday at 5 a.m.

By invoking Adam Smith's "invisible hand," I don't mean to say that policy makers have nothing to worry about here. Smith's

Wealth of Nations teaches us about the phenomenal power of markets to adjust. But these markets adjust, as Yochai Benkler's *The Wealth of Networks* powerfully teaches, in light of the baseline allocation of rights. Policy makers must assure that rights are not allocated in a way that distorts or weakens competition. A costly overlay of spectrum rights, for example, or an inefficient market of copyrights, can stifle competition and drive markets to unnecessary concentration. These factors must be regulated by policy makers. They will not be "solved" by an invisible hand.

But for my purposes here, the most important policy mistake is one that stifles the Sousarian instinct: a policy driven by the view that the only way to protect RO culture is to render RW culture illegal. That choice is a false choice. In the next chapter, I want to sketch a future for RW culture that might motivate us to see just why we should avoid this false choice.