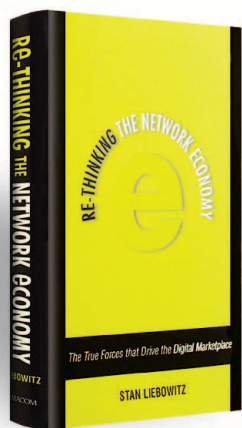




Executive Book Summaries®



By Stan Liebowitz

The True Forces that Drive the Digital Marketplace

RE-THINKING THE NETWORK ECONOMY

THE SUMMARY IN BRIEF

The Internet changes everything! *Or so claimed the legions of over-excited Internet boosters who saw in the new technology the overthrow of all the old rules of economics and business.*

In Re-Thinking the Network Economy, Stan Liebowitz explains why the dot.com bust was inevitable. The theme of this summary, however, is not, "I told you so!" but rather, "Here's what will work." The Internet does offer many incredible business opportunities, Liebowitz writes, as long as businesspeople and their advisors don't ignore the traditional, fundamental concepts and strategies of commerce and economics. The laws of supply and demand still hold true. Economies of scale are still pertinent.

The rules, in sum, still apply.

In Re-Thinking the Network Economy, Liebowitz examines the economic forces relevant to Internet commerce, thus identifying the models and strategies that have the greatest chance of success.

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What You'll Learn In This Summary

✓ **Internet companies must follow the same laws of economics as their bricks-and-mortar counterparts.** The impact of laws, such as economies of scale, depends on the industry, not on whether a company is Internet-based.

✓ **The first-mover advantage is a false theory based on false evidence.** Many Internet companies made the mistake of rushing to market with inferior products and services — and paid for it.

✓ **Not everything can be sold on the Internet.** Internet retailing pioneers had grand ambitions, only to discover that for many products, nothing beats an old-fashioned, bricks-and-mortar store.

✓ **Customer service still counts.** Internet companies may be able to sell information-based products, as long as the customer does not get better service from a human operator.

RE-THINKING THE NETWORK ECONOMY

by Stan Liebowitz

— THE COMPLETE SUMMARY

Basic Economics of the Internet

The Internet creates value by lowering the costs of information transmission. That's it. Nothing more.

Not that this achievement is not extremely important. The invention of cars and airplanes lowered the costs of transportation, and language lowers the costs of communication — two monumental achievements. The impact of the Internet on our society should not be minimized. Information is now available in unprecedented simplicity, quantity and variety.

Nevertheless, Internet commerce must still obey the laws of economics. And this is where many Internet boosters went wrong.

This article looks at how the economic concepts of *network effects*, *economies of scale*, *instant scalability* and *winner-take-all* apply to Internet-based products and companies.

Economic Concepts

Network Effects. Network effects occur when a product becomes more useful to consumers in proportion to the number of consumers using that product.

The fax is an example. To send a fax, both the sender and the receiver must have fax machines. Owning a fax machine would be useless to you if no one else had a fax machine. It would be only slightly more useful if a very few of your correspondents have fax machines. However, if most of your correspondents also have fax machines, your fax machine is of much greater use to you.

Note that network effects don't have to be related to high-technology products. Automobiles have network effects — the more mechanics and parts in the area, the easier it is for you to fix your car. On the other hand, if you own an exotic car that most people don't have in your area — a Citroen, for example, in Ohio — you don't benefit from the same network effects that Chevrolet owners do.

Economies of Scale. The concept of economies of scale is basic: the more you sell, the lower the average costs. Thus, Internet companies push to sell more and become larger — even at the short-term expense of

profits — in order to develop these economies of scale.

Average costs are simply total costs divided by the units sold. Products with large start-up costs, including high-tech products, benefit from economies of scale.

Instant scalability. Instant scalability is the ability to immediately change your production process and fill a new market demand. For example, say that you are producing copies of the Word application on CDs. If the Quicken application suddenly becomes hot, you can easily switch from producing Word CDs to producing Quicken CDs.

Network effects and economies of scale can lead to winner-take-all results. Larger companies can block out smaller rivals. Instant scalability does not necessarily lead to winner-take-all. If the product you switch to turns out to be a dud, you have no protection in the marketplace.

Winner-Take-All and the Internet

One of the mistakes that Internet champions made was to assume that all Internet industries displayed winner-take-all characteristics.

For example, it was thought that all companies operating on the Internet were subject to network effects. This is true in a few exceptional cases, such as AOL's messaging service. But in the vast majority of cases, the Internet does not create network effects. For example, if you're shopping for toys on the Internet, what do you care if there are 50 people or 5,000 people also shopping for toys? Price, availability, choice, the company's reputation for quality — these are the factors that lead to both retailing and e-tailing success.

The bottom line is that the winner-take-all characteristics
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Basic Economics of the Internet

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tics of a company depend on the industry, and not whether that company is a dot.com or a bricks-and-mortar company. The overstated winner-take-all characteristics of Internet commerce was one fundamental reason many people misjudged the potential success of e-companies. ■

Racing to be First

The belief in the winner-take-all characteristic — that Internet industries would probably have one dominant company — led to another major economic concept that is only now starting to be rejected: the first-mover advantage. According to this theory, the first company in the market wins. It's important to note that the theory doesn't say the first company in the market with a quality product wins. On the contrary, proponents believe that it's better to be first, than best — or profitable.

The first-mover advantage theory, however, is based on faulty concepts and faulty examples.

First Movers and the Concept of Lock-in

The first company in the market wins, proponents argue, because of what is called “lock-in.” Basically, consumers are locked in to continuing to buy the product they usually buy for two reasons:

1. They don't want to incur the costs of switching to a new product — for example, becoming familiar with a new product or finding the new product incompatible with other work products (such as reading old documents on a new computer).
2. They don't want to be caught on the short end of network effects — no one else is using the new product they bought, and therefore the product is of limited use.

Reason number one hardly leads to a very robust lock-in. If the new product is definitely superior, it will be worth the switching costs.

First-mover proponents, however, argue that quality is not enough to overturn the first-mover advantage; the network effects have to be overcome as well. In other words, consumers will be afraid to switch to a better product because they don't expect to find many other consumers in that market.

The fact is that a weak form of lock-in does exist. For example, you keep going to the same gas station just out of habit. This is a weak form of lock-in. But the strong form of lock-in that supports the first-mover-advantage theory does not exist. If the price and/or quality are right, people will switch. You may not go to a different gas station to save 2 cents on the gallon, but you will switch if you can save 10 cents. Likewise, if a second,

The Real Story of the QWERTY Typewriter

One of the most famous examples used to demonstrate the first-mover advantage theory is the success of the QWERTY typewriter. The story goes like this: The first typewriters were so technologically inferior that typists were typing too fast for the machines: the keys kept jamming. Thus, the keys were arranged in positions that actually slowed down typing (for example, the frequently used word “was” requires using your two weakest fingers). Better typewriters were later developed that allowed faster typing without jamming; but because of the QWERTY's first-mover advantage, those better but later typewriters were never successful.

Here's the real story.

First, the letters were not positioned in order to slow down typing. Instead, they were positioned to shift the typing of successive letters from the left hand to the right — in order to speed up typing.

Second, the typewriter developed later with a different keyboard was patented by a professor of ergonomics named August Dvorak. Dvorak positioned the letters to minimize the distance traveled by the fingers; he believed this was the key to faster typing. And indeed, a World War II U.S. Navy study indicated that the Dvorak typewriter was 40 percent faster than the QWERTY typewriter.

It should be noted however, that a study conducted in the 1950s by Penn State for the General Services Administration clearly demonstrates the inferiority of Dvorak's design — but that study is never mentioned in the first-mover literature. It should also be noted that the U.S. Navy study included irregularities that biased the study in favor of Dvorak's design — not too surprising since the U.S. Navy study was conducted by the Navy's expert, Lieutenant Commander August Dvorak!

third or fourth player comes into a market with a better deal or higher-quality product, people will abandon the first player.

No real-life case exists of a first player holding on to its position despite a lower-quality product. The QWERTY typewriter example often cited by first-mover proponents is actually based on faulty history: The QWERTY typewriter has not been proven by unbiased tests to be slower than subsequent typewriters.

One could point to Amazon.com and declare that it's a case study of first-mover advantage. This declaration

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Racing to be First

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would assume that there are better Internet book sellers losing to Amazon because Amazon was first. The real problem is that Amazon continues to offer high quality and low prices. People may be used to dealing through Amazon — an example of weak lock-in. If a competitor offers a significantly better deal, however, consumers will switch. They are not locked in.

If bricks-and-mortar bookselling is not winner-take-all (and Barnes & Noble and Borders still hold only 10 percent of the market each) then Internet bookselling won't be either.

It's that simple. ■

The (Non)Ubiquity of E-Tailing

How many pundits declared that e-tailing was going to put traditional bricks-and-mortar stores out of business — no matter what the product sold.

Of course, the scores of bankrupt e-tailers have proven the pundits wrong. Internet stores, however, are not dead. This article outlines the success factors related to online retailing.

Type of Product

The Internet provides advantages and disadvantages to the consumer. The advantages include a large selection, no lines at the register and perhaps lower costs. The disadvantages include the inability to see and touch what you are buying and the lack of instant gratification — you have to wait to receive your product.

To know which products are more likely to sell on the Internet, you have to take the following product characteristics into consideration:

1. Size and Bulk Relative to Value. Some products, such as cement, are large and bulky compared to their value. Others, such as diamonds, have a very high value compared to their bulk. Obviously, the products with a high value to bulk ratio are more likely to be shipped over long distances than products with a low value to bulk ratio.

2. The Immediate Gratification Factor. Many products are bought on impulse, with the buyer wanting to enjoy that impulse purchase immediately. The built-in delay of e-commerce doesn't offer this immediate gratification.

3. Perishability. Perishable items, such as many foods, are not made to be shipped over long distances.

4. Experience Products. Some products need to be experienced — for example, you want to sit in a car and test drive before you buy it. The Internet does not offer

Will Free-Riding Turn Manufacturers Against E-Tailers?

Free-riding occurs when one sales outlet benefits from the services provided by another sales outlet.

Take the example of car dealerships that offer test drives. Test drives are expensive — a salesperson must accompany the prospective buyer, cars get more miles on them, and so forth. Car dealers who offer test drives thus have higher costs, which they pass on to the consumer in higher prices.

The result could be that a car buyer test drives a car at one dealership and then buys the car from another dealer that has lower prices because it does not offer test drives. The second dealership would be free-riding on the services provided by the first dealer. Eventually, the dealerships that offer test drives could find themselves going out of business.

Minimum Prices?

Because manufacturers want to encourage test drives, which they believe lead to greater sales, they have in the past attempted to require minimum prices from retailers, so that free-riders cannot undersell the dealers offering the test drives. Laws setting minimum prices have been declared illegal by the courts and are no longer on the books.

This example, however, demonstrates why some manufacturers might turn against Internet retailers who want to benefit from the services provided by bricks-and-mortar retailers. Manufacturers may feel that Internet retailers do not provide the level of service that manufacturers believe is necessary for the long-term sales of their products. They may also fear that the success of Internet discounters will push full-service retailers to drop their level of service. It would then be in the long-term interest of manufacturers to keep their products away from Internet retailers.

this experience opportunity.

5. Thin Markets. Some niche products have very few buyers in a market. For example, very few people in Virginia want the food products to make Algerian desserts. Internet-based companies, for whom the geographic massing of customers is irrelevant, have an advantage if they are selling to thin markets.

6. Taxes. The Internet offers a tax-free haven for out-of-state customers. Eventually, however, this tax protection will probably disappear.

The Best E-Tailing Products

Given the characteristics above, three types of prod-

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The (Non)Ubiquity of E-Tailing

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ucts are most compatible with full-fledged e-tailing.

The first is **digitized products** — that is, products that are inherently digital, such as computer programs, or that can be digitized, such as music, movies and other pure-information products. Digitized products have no bulk but high value, and don't have to be "touched" before the purchase. Internet delivery of music and movies — the latter to be downloaded onto DVDs — will replace the traditional delivery channels.

The second type of product compatible with e-tailing might involve what can simply be characterized as **information**. Examples include airline, car and hotel reservations, stock purchases, news retrieval and classified advertising. This type of information can be transmitted more quickly and economically by the Internet than by phone or mail. However, the service provided over the Internet must be equal to the service provided by a live operator.

For example, if you are reserving a hotel room over the Internet, does the Web site tell you what type of bed is in your room? The Web site may offer a price for a "standard" room, but does it give the definition of a standard room?

Another example involves the purchase of options from online brokerages. Options have complicated symbols based on strike price and expiry date. If you want to buy options, you must track down the symbols yourself. Why doesn't the Web site ask you for the strike price and expiry date and provide you with the symbols, instead of the other way around? If customers find themselves stuck in front of the computer screen asking, "Now, what do I do?" they'll reach for the phone — and do their business the old-fashioned way.

The third type of products compatible with Internet retailing are **books and CDs**. Unlike music, digitized books will not replace the traditional paper product any time soon. However, the sale of books over the Internet is another story. Books do not have to be experienced, and most people can wait a few days for them to arrive by mail. Shipping costs can be a problem, but buying several books at a time can make the costs of shipping relative to value reasonable. CDs are less bulky and, for the same reasons as books, are good candidates for e-tailing.

The Worst E-tailing Products

Here is a list of products you should probably not try to sell on the Internet:

1. Groceries. Grocery items tend to be bulky relative to their value. Long-distance delivery for the individual consumer is not cost-efficient. Perishability is another problem. Even if the products are shipped in ice, expen-

Hubris Alert: The Story Of Online Grocers

Online grocers were among the more well-funded and better publicized early Internet start-ups — despite some obvious drawbacks of food as an Internet retail item (as mentioned in the article on this page, people want to squeeze the grapefruit!).

Webvan and HomeGrocer, the two leading online grocers, had market capitalization in 1999 that exceeded \$5 billion. (By comparison, Winn-Dixie, the fourth largest bricks-and-mortar grocery chain in the U.S. had a market capitalization of \$3 billion.)

The reason investors were so high on these enterprises was the belief that the new home-distribution model would take care of gross "inefficiencies" in the traditional methods of warehousing and distributing food. The inefficiencies would be addressed through such things as automated warehouses and special delivery trucks.

The Internet entrepreneurs and their supporters seemed to have forgotten that the grocery business is very mature and very competitive. The market has been tough to crack, even for foes as fearsome as Wal-Mart and Costco. As a result, one can assume that any inefficiencies would have already been addressed by competitors seeking to break in.

Of course, there is always room for innovation. But was the innovation that the Internet grocers were offering — home delivery — something that consumers wanted? Apparently not. Consumers decided that shopping when they had the time and having the flexibility to make last-minute decisions when they were going through the aisles was preferable to waiting at home to take delivery of food items checked off on an Internet form.

Eventually, HomeGrocer was bought by Webvan, which itself went out of business — the most well-financed e-commerce bankruptcy to date.

sive pinpoint delivery systems are required; after all, perishable or frozen foods can't be left on the porch.

Finally, some foods, such as fruit and meat, are experience products; consumers want to squeeze or at least see them before they buy.

2. Automobiles. One problem for cars is that they are clearly experience products. As noted previously, you want to sit in and drive the car before you buy. This sector is also hampered by numerous state and local regulations on who can sell cars and where.

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The (Non)Ubiquity of E-Tailing

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3. Furniture. Furniture is bulky and is an experience product: You want to sit on the couch or lay on the bed before you buy.

4. Prescription Drugs. Prescription drugs are used either for chronic conditions or to alleviate an unexpected health problem, such as a cold. For unexpected health problems, you want the immediate relief that an Internet purchase cannot give you. While immediate gratification is not involved in the purchase of drugs for chronic conditions, the Internet does not offer any real advantages over the traditional phone-based channel. For example, you don't need information to make the choice (the doctor prescribes the medicine), and since a pharmacist must still prepare and send out the prescription, there are no inherent cost-savings for an Internet pharmacy company.

Pricing Systems On The Internet

The success of Internet companies sponsoring auctions or other forms of pricing, such as eBay and Priceline, has encouraged some pundits to predict that Internet-based retailing is going to lead to the demise of fixed pricing. This is not going to happen.

Bargaining was once common in the Western world, and is still common in some third-world countries, for a number of reasons. First, the shop owner dealt directly with the customer. In most stores, the owner is not present. Second, people had time to haggle; today, people are looking to shorten the time it takes to purchase something, not lengthen it. Imagine haggling over prices at the grocery store checkout line. Only with the purchase of very expensive items, such as automobiles, is bargaining worth the time.

The Internet does not alter any of these conditions, and therefore, fixed pricing will continue to be the pricing system of choice. ■

For Additional Information on e-ordering vs. e-tailing, go to:
<http://my.summary.com>

Is Creating Value Profitable?

The Internet is going to create value. But will that value necessarily translate into great profits for Internet companies? Not necessarily.

First, the laws of economics do not show a direct link between value and profits.

For example, your company may create great value, but how much did it cost you to create that value? Because the value that was expected to be created from Internet commerce was much larger than the actual

Don't Assume Low Costs Mean High Margins

Low-costs don't necessarily translate into higher margins, and subsequent above-normal profits.

Let's say that in your industry, the average return on investment is 10 percent; in other words, a company will make a profit that is equal to 10 percent of its investment.

If company A invests \$50 million to reach \$100 million in sales, its profit will be \$5 million (calculated by taking 10 percent of \$50 million). Its margin will be 5 percent (calculated based on \$100 million in sales yielding \$5 million in profits).

Company B's costs are higher: It must invest \$150 million to reach the same \$100 million in sales. With a 10 rate of return, its profit will be \$15 million.

In conclusion, company A had lower costs (\$50 million) than company B (\$150 million). But company A also had lower margins (5 percent) than company B (15 percent).

The lower costs incurred by Internet companies, therefore, lead to lower margins.

	Sales	Investment	Normal Profit	Margin on Sales
High Investment	\$100,000,000	\$150,000,000	\$15,000,000	15%
Medium	\$100,000,000	\$100,000,000	\$10,000,000	10%
Low Investment	\$100,000,000	\$50,000,000	\$5,000,000	5%

value created, companies overinvested in setting up their e-tailing operations. The result: negative net profits — and for many companies, bankruptcy.

The law of supply and demand, as exemplified in what is called the diamond-water paradox, also disputes a link between value and profits. Without water, we cannot survive. The ownership of diamonds, on the other hand, is not necessary to our survival. Water, therefore, has much greater **value** than a diamond, yet a diamond has a much higher **price** than a gallon of water. The reason is supply: There is much more water than there are diamonds.

In sum, great profits do not necessarily flow from great value.

The Cruelty of Competition

Competition will also reduce the profits that can be generated from the Internet. The problem is that the Internet offers low barriers to entry (for example, it's much less costly to set up an Internet Web site than to open a bricks-and-mortar store). Low barriers to entry

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Is Creating Value Profitable?

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attract greater numbers of competitors. More competitors battling each other for customers translates into more supply and choices for consumers — and less profits for producers.

One implication of the cruelty of competition may be that Internet companies try to get the government to artificially reduce competition by restricting entry to competitors — a practice one already sees in the automobile and agricultural sectors. Stay on the lookout: The Internet is ripe for competition-restricting efforts.

What About Profits?

Some may argue that costs are so low for Internet commerce that Internet companies are bound to generate above-normal profits.

Two competition scenarios for Internet companies vs. bricks-and-mortar companies exist. One is that the two types of companies coexist side-by-side. In this case, Internet companies will compete against each other (for the customers who prefer virtual retailing to bricks-and-mortar retailing), not against their bricks-and-mortar counterparts. Since there is no competition between Internet and bricks-and-mortar companies, the cost-advantages of Internet companies over bricks-and-mortar companies are irrelevant.

The second scenario is that Internet companies compete directly against bricks-and-mortar companies. If Internet companies have lower costs, they should be able to drive the bricks-and-mortar companies out of business.

However, it should be noted that Internet companies will still have other Internet companies to compete against — and, once again, there will be no cost-advantages — and no above-normal profits. ■

Can Advertising Revenue Support the Net?

The online world was originally a subscription-based world. Online services, such as CompuServe, Genie and AOL, paid a fixed monthly fee, which usually included five hours of use, and additional fees for additional hours. Web sites such as The Wall Street Journal and Slate also required subscriptions.

Eventually, the Internet adopted the broadcast television model: free content interrupted by advertisements.

There are three problems with this model.

First, the Internet audience is much smaller than the television broadcast audience. Second, it's easy to avoid the advertisements (as opposed to the advertisements

Why the Television Model Really Worked

Internet retailers are attracted to the broadcast television model of revenue generation: no subscription fees, just ads. Internet banner ads are intended to emulate TV commercials.

The truth, however, is that broadcast television was successful in spite of its revenue generation model, not because of it.

First, television was an industry with very limited entry. Creation of television stations was limited by the government and by limitations in the available television frequency spectrum. Competition, in other words, was kept to a minimum.

In addition, broadcast television cannot prevent people from enjoying the service: All it takes is an antenna and a television set. Thus, television chose the advertising-only model for generating revenues because it had no other choice.

Cable has changed both of these issues. First, broadcast television now faces intense competition. Second, cable can restrict viewership, and is thus able to combine advertising with subscription fees to generate revenue.

Broadcast television is still stuck with an inferior revenue-generation model — and will eventually pay the price. One day, broadcast television will be able to afford to air old reruns, and not much else.

placed strategically during television programs). Finally, companies are less likely to divert advertising money from other media to pay for Internet advertising, which targets more specific, or “narrow,” audiences.

Eventually, Web sites will realize that advertising alone is not covering their costs. After all, the average American spends more than four hours per day in front of the television, and only a total of half-an-hour per day on the Internet. There is some room for growth, but it's doubtful that daily Internet use will reach the level of daily television viewing.

In sum, it is unlikely that advertising revenue based on the broadcast television model can support all of the Web sites counting on it. A better solution is the cable television model, which is a hybrid of advertising and subscription. Magazines and newspapers also use the hybrid model. The advantage of the hybrid model is obvious: It is a dual revenue system, so you are not dependent on one source of revenue. Instead of counting on banner ads, Web sites should start experimenting with small subscription fees — these subscription fees are where the major revenue increases will come from in the future. ■

Copyright and the Internet

One of the thorniest issues to arise from the advent of the Internet involves copyright protection. The Napster case, in which the customers of this dot.com company were downloading free copyrighted music, drew attention to the issue. The music industry pursued Napster in the courts and eventually stopped the free distribution of the copyrighted material.

Let's take a closer look at this important and complicated area of Internet retailing.

The Economic Impacts of Copying

The issue at the core of copyright law (and any intellectual property law) is the degree to which the copyright holder can appropriate the value produced by the consumption of his or her work. In other words, what percentage of all the money made from a song should go to the copyright holder?

The issue of appropriation of value involves a tug-of-war between *consumption efficiency* (allowing consumers to enjoy the benefit of the copyrighted work) and *production efficiency* (ensuring that creators of copyrighted work have an incentive to create). For example, if creators get no or little revenue from the work, they will have less incentive to create. On the other hand, copying a work might bring that work to more people, thus increasing consumer efficiency — providing goods to consumers who want them.

Thus, while pirating is considered harmful to producers — they get no money from their work — the issue is not that simple.

For example, what if a consumer engaged in pirating would not have purchased the original even if pirating was not an option? In this case, preventing the pirating reduces consumption efficiency (it diminishes the gratification of the person engaged in piracy) but does not increase production efficiency (it does not bring money to the creator of the work).

Another scenario is that piracy increases the sale of the original material. For example, you tape a friend's CD of a particular artist, then decide you like that artist and, thus, buy his or her next CD. This is called an "exposure effect."

Crying Wolf

It can be easy to develop "what-if" scenarios to bolster your position. However, the opinion that copyright holders are overstating the danger of Internet pirating is bolstered by the fact that copyright holders have cried wolf before. For example, Hollywood was convinced that VCRs would bring the downfall of the movie theater, and destroy movie industry revenues. After all, why pay for a movie when you can just tape it off TV? It turns

The Network Effects of Pirating

Advocates arguing against limiting copying from the Internet point out the potential network effects benefits of pirating.

Pirated word-processing software, for example, might lead to greater adoption of that software since more and more computers can read it. It's thus possible that the creation of a market catalyzed by pirated material would prove more lucrative in the long run than the revenues that would have been made by restricting the pirating.

out, of course, that VCRs are mostly used to play prerecorded tapes. Instead of reducing revenues, the VCR actually created *another* revenue stream for Hollywood.

The Threat of Napster

Despite the potential positive impact of piracy and past instances of crying wolf, the music industry's fear of Napster was not unreasonable. The flexibility and quality of the technology — files downloaded from Napster are good substitutes for the original and can be burned onto CDs and copied to MP3 players — means that downloading the files could replace the purchase of authorized CDs.

However, while Napster did appear to be a threat to the music industry, and although the music industry won in the courts, the arguments against Napster are theoretical: There is no empirical evidence to what might have happened had Napster been allowed to continue.

In addition, the music industry might find itself with a greater problem on its hands — decentralized copying. It might have been much easier to develop a protocol that allowed some control over copying that was centralized through Napster, than to try to control peer-to-peer copying; without Napster, there are no centralized servers keeping track of the uploads and downloads.

Digital Rights Management

Digital rights management (DRM) technologies, which prevent unauthorized copying on a large scale, should reduce any harm incurred by copyright holders as a result of copying technologies. As with the movie studios, music companies will find that the inexpensive copying made possible by the Internet (DRM attaches a price to the copying) will prove to be a boon to the industry. The distribution of music through the Internet will benefit both producers and consumers (to the detriment of bricks-and-mortars record stores).

The industry just needs to find the right pricing strategies. For this, it should learn from the movie industry, which discovered that it could make much more money selling videos at \$20 instead of \$100. ■