

Terrorism Untamed • Helen Keller • Dance Designs

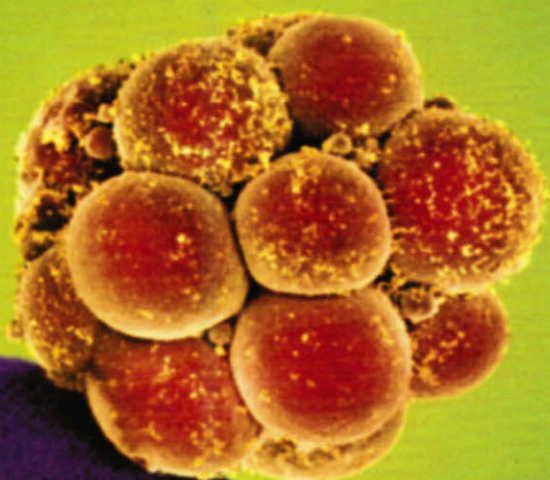
# HARVARD

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## Stem Cells

The science, the ethics



MUSICAL SHARES

## Upside for Downloads

**L**ast year, pop star Madonna went on the attack in the war over file sharing, the popular but illegal practice of downloading copyrighted music from the Internet for free. In the spring of 2003, she and her record label, Warner Brothers, seeded the Web with faux downloads of her new song "American Life." Instead of music, downloaders heard an obscene reprimand from the queen of pop herself. She's not alone: lots of musicians and music executives maintain that file sharing puts the industry at risk. From 2000 to 2002, the number of CDs shipped in the United States plummeted by 15 percent and downloads, say many in the music world, are to blame.

Against such a backdrop, the findings of Felix Oberholzer-Gee, associate professor of business administration at Harvard Business School, are nothing short of heresy. Oberholzer-Gee examined downloads and record sales for the last four months of 2002, and determined that downloads didn't hurt record sales. In fact, even in his most unfavorable model, only one CD sale was lost for every 5,000 songs downloaded.

To conduct the study, Oberholzer-Gee and Koleman Strumpf of the University of North Carolina obtained the log for the OpenNap servers, where 1.75 million songs were downloaded in the last 17 weeks of 2002. They tracked songs from the 680 best-selling albums of that period (according to the *Billboard* charts) to see whether there was a relationship between the number of times a song was downloaded and sales of the CD that included that song. Their statistical model revealed no correlation between the two, deflating the industry's claim that every free download means a lost sale.

The results dropped Oberholzer-Gee and his colleague into the center of a controversy. "We expected it to be newsworthy, but nothing along these lines," he says. "Every morning I come to my office and my e-mail in box is completely flooded." Industry response was swift: the Recording Industry Association of America issued a press release criticizing the study on several counts, including the fact that it contradicted earlier findings.

Those studies were probably flawed, Oberholzer-Gee maintains. Researchers typically gather details about Internet behavior by observing Internet users who allow researchers to monitor their behavior, or by taking surveys of Internet users. "The problem with the survey studies is that this is an illegal activity," Oberholzer-Gee says. "Would you tell some-



one, 'Yes, I'm doing it, and I'm doing it all the time'? And if I voluntarily sign up for someone to watch my every move on the Internet, I'm probably not the average person."

Others have wondered if the fact that the research sample included the holiday season, when many buy CDs as gifts, may have artificially bolstered CD sales. Though this argument made sense to him at first, Oberholzer-Gee re-estimated the model without the December data and found that holiday sales didn't make a difference.

So what has forced record sales to plummet? Oberholzer-Gee can't be sure based on this study, which merely shows that downloads aren't to blame. But one theory is that CD sales in the early 1990s ballooned because consumers were purchasing copies of old albums just to have them in the new CD format—and that buying binge is now over.

"I personally think the study is great news for the industry," he says. "One can imagine that file sharing would hurt the industry, and it's fantastic to know that this is not the case." What's needed, he says, is for industry leaders to take a clear-eyed, unemotional look at the issue. "In the long run, the industry needs to know what digital file sharing does [in order] to understand how it can survive and how it can make money and how it can bring music to music lovers."

~ ERIN O'DONNELL

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to \$200 per square foot—the going rate for purchasing those units is between double and triple that.

The researchers found that between 1984 and 2002, the mean and median sales prices for condominiums in Manhattan

were about \$486 per square foot and \$455 per square foot respectively (adjusted to 2002 dollars)—meaning a 500-square-foot condo would cost nearly \$250,000. Ordinarily, such robust prices would lead to increased competition and greater

supply, which would cause prices to fall. However, Manhattan's prices have continued to rise at rates more than double the national average. And since 1980—despite strong demand, rising prices, and a surging economy—there's been a steady