



WHARTON on New Media



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New Media Pose New Challenges to Print, Sales Strategies, and Security

NEW MEDIA ARE CONTINUALLY REDEFINING how we work, play, and process information. The latest round of potentially disruptive technologies, along with novel sales strategies and the unrelenting growth of online social networking, is reshaping the way we will view textbooks, smartphones, and core attitudes on privacy and security. The risks to privacy posed by new media, meantime, are getting a surprisingly laissez-faire response from the youngest generations of users.

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Is Apple's iPad the Final Stake in the Heart of Textbooks?

Apple created a new product category when it launched the iPad in early 2010. The 1.5- pound tablet computing device has a 9.7-inch screen and built-in Internet connectivity. Designed to fit between the iPhone and its MacBook laptop—with prices ranging from \$499 to \$829 depending on options—the iPad targets netbooks—mini-laptops—and also tablet-style e-book readers such as Amazon.com's Kindle, Barnes & Noble's NOOK and Sony's Reader. The device can display pictures and house an entire library of books. That capability raises an interesting question: Will Apple's iPad kill the textbook?

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Google's Nexus One Aims to Disrupt the Wireless Industry

In early 2010 Google launched the Nexus One—a “superphone” based on the search firm's own Android operating system. The phone includes integrated services such as Google Earth, an online map and satellite image tool. Google's software, combined with a speedy processor, represents a new category of smartphones as powerful as laptop computers of three to four years ago, according to the company. But there is another aspect to Google's offering that is breaking the mold: Google wants to release the grip that telecom carriers have on devices and create a world where consumers can pick handsets and carriers without signing a contract. Will it work?

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Early Tremors: Is It Time for Another Social Network Shakeout?

Rumblings of consolidation have continued in the social networking landscape. For example, Facebook acquired smaller rival FriendFeed in August. Friendster, viewed as an also-ran in the U.S., has refocused its operations on the Asia-Pacific region, where it is among the leaders in traffic. News Corp., owner of MySpace, has reshuffled executives and restructured the unit as traffic growth slows. Experts at Wharton say that these moves and others may be the first hints of a shakeout in the social networking market.

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Online Social Networks Make It Easier to Bypass Personal Security Barriers

For many young people today, Facebook and other online social network sites are simply a normal channel of communications. Younger users appear—at least to parents and older generations of Internet users—far less aware of privacy issues that could lead to problems such as identity theft, for example. “Our kids today will give everything [in terms of personal information] away, but it's not at all clear how this will shake out in the long run,” says Wharton marketing professor Peter S. Fader. “Privacy is a moving target.”



Is Apple's iPad the Final Stake in the Heart of Textbooks?



Many educators are pointing to Apple Computer's recently introduced iPad as the prototype for an e-reader that will be able to hold all the textbooks a student needs. Its color touch-screen, interactive-video capability, and virtual keyboard, they say, give it greater potential for textbook users than monochrome readers like Amazon's Kindle.

Apple has been quiet about its designs on the textbook business since unveiling its new device, which went on sale in April. Meanwhile, Hewlett-Packard and Dell have also announced portable tablet computers, and Microsoft is rumored to be developing a two-screen model.

While some students may be using notebooks or their more portable cousins, netbooks, to read textbooks, some experts predict that within the next 10 years, most U.S. college students—and many high-school and elementary-school students as well—will probably be reading course materials on an electronic device

instead of in a paper book. And that will have a broad impact on students and teachers, not to mention the \$9.9 billion textbook-publishing business.

If this is, indeed, the future of textbook publishing, a key question remains unanswered: Is it economically sustainable? Almost every industry—from travel agencies to newspapers—that has moved to a digital model has seen its profits decimated and some existing participants bankrupted. Textbook “publishers are aware that their current model is doomed,” says Peter S. Fader, co-director of the Wharton Interactive

Media Initiative (WIMI). Adds WIMI co-director Eric Bradlow: “It’s not just that the bound-dead-tree is a dead model. [It’s that publishers] will have less monopoly power.” Assuming the cost of production goes down, “market forces suggest prices would come down” as well.

Bradlow also predicts there will be new revenue models for publishers, including timely ads and electronic coupons. For example, when students finish a chapter and show mastery by passing a self-assessment quiz, an ad could pop up suggesting they reward themselves with a run to the local Ben & Jerry’s.

Frank Lyman, executive vice president of online-text publisher CourseSmart, says that Apple’s tablet “is likely to boost demand for digital textbooks because it will capture the imagination of the next group of students who haven’t yet tried eTextbooks.” He adds that there are 75 million iPod and iPhone users who already know how to use the iPad because of its similar interface.

Within days of the iPad announcement, a group of major educational publishers announced they all would use technology developed by ScrollMotion, a New York-based content technology company, to transfer textbooks to the iPad. The group includes McGraw-Hill Companies; Houghton Mifflin Harcourt K-12, which is a unit of Education Media & Publishing Group; Pearson's Pearson Education, and Kaplan, the test-prep unit of The Washington Post Co.

At the end of February, McGraw-Hill's Macmillan unit unveiled a new electronic

it is really going to happen in 2010." "[We] have been anticipating this," adds Bruce Hildebrand, executive director for higher education at the American Association of Publishers (AAP), a trade group. Publishers, he says, will "provide their content on the best technology available," although he notes that electronic readers don't yet meet educational needs as well as textbooks do.

Educators and book publishers are also predicting that eTextbooks will change the way teachers teach, students learn and textbook publishers sell their con-

money. The National Association of College Stores estimates that less than 3% of textbook sales today are digital versions, although many paper textbooks are sold with supplemental materials on CDs or web sites. Fader predicts that soon "some innovative college" will require incoming freshmen to get an iPad and will push professors to use them for course materials.

\$220.95 vs. \$110.49

Electronic readers have already shaken up the market for fiction and non-fiction books, known in the industry as "trade books." Trade books accounted for \$8.1

"Education-related content has always been on the cusp of taking advantage of the promise of technology. Finally it's here."

John Lema
ScrollMotion CEO



book imprint, DynamicBooks, that will let professors create their own textbooks, using their own material as well as materials developed by Macmillan. "Basically, they will go online, log on to the authoring tool, have the content right there and make whatever changes they want," Brian Napack, president of Macmillan, told *The New York Times*. "And we don't even look at it." DynamicBooks includes such titles as *Chemical Principles: The Quest for*

Insight, by Peter Atkins and Loretta Jones, and *Psychology*, by Daniel L. Schacter, Daniel T. Gilbert and Daniel M. Wegner. Students will pay about one-third as much as the paper-bound version's list price.

ScrollMotion already partners with some publishers to make books into iPhone apps. "Education-related content has always been on the cusp of taking advantage of the promise of technology. Finally it's here," says ScrollMotion CEO John Lema. Rik Kranenburg, group president of higher education for the education unit of McGraw-Hill Companies, recently told *The Wall Street Journal*: "People have been talking about the impact of technology on education for 25 years. It feels like

tent—often in unexpected ways. Yet while students eagerly anticipate lower costs and lighter backpacks, teachers remain wary and some publishers still question the model. Wharton management professor Daniel Raff, who has studied the book business, suggests that publishers will maintain their grip on the school market. "One expects textbooks to have a certain authority. To the extent they are brands, they would retain [that] authority." He notes that textbook publishers also have long-lasting copyrights along with skills in managing licensed materials. Moreover, it isn't clear that students are ready to study from an eTextbook. As Stephen Kobrin, editor of Wharton School Publishing (WSP), notes, "We publish all our course packs [collections of customized course readings] digitally. When I ask students how they read them, they say they print them out." Kobrin estimates that currently 4% to 5% of WSP's business is digital.

Indeed, approximately 88% of college students own laptops, according to a study by EDUCAUSE Center for Applied Research, a Boulder, CO, think tank. But so far, few of them download electronic textbooks, even though they could save

billion in U.S. sales in 2008, the most recent full year reported by AAP, 18% less than the textbook market. Forrester Research estimates that book lovers bought some three million electronic readers last year. E-readers attract some of the book industry's best customers, who regret the demise of bookstores but like the idea of \$10 titles that can be downloaded at will and don't crowd overburdened bookshelves.

"As complex as the issues are for trade book publishing, it's far more so in textbooks," says Fader, partly because price-sensitive students are not the ones making the decisions. At the college level, textbook decisions are made by teachers. In K-12, they are mostly made by school boards. K-12 schools "will be very slow to change, partly due to pure economics" since they would have to equip whole classes of students with fragile, mobile readers, says Fader. In addition, teacher unions will be skeptical, and school boards will be hesitant to make the leap because "people focus on potential downsides." Still, he says: "The evolution is inevitable. It's just a question of when."

In the specialized education arena, digital textbooks are likely to appear very soon,

Fader adds. “I see it most likely to start through executive education,” where binders of material rather than traditional texts are typically handed out. Conceivably, an e-reader with content installed could be bundled as part of the course price. “It’s a high-margin environment.”

Kaplan has already announced that it is making its MCAT preparatory course materials (for admission to medical school) available as apps on iPhones and iPods using ScrollMotion technology. Lema says they will also be available on the iPad. According to Kaplan, the apps replace 20 pounds of paper instructional materials.

And despite mixed feelings, the textbook industry has already been moving into digital distribution. Five of the biggest textbook publishers founded CourseSmart in 2007 to provide digital versions of college textbooks. The company now has some 6,000 textbooks available in a common format that students can download. Students get a 180-day license for the book rather than permanent ownership—which means there is no used-book market for CourseSmart titles.

CourseSmart prices are typically half the list price of a textbook. For example, Harvard professor Gregory Mankiw’s introductory *Principles of Economics*, which has a list price of \$220.95, costs \$110.49 for the electronic version at CourseSmart. Amazon.com sells the paper version for \$168.01 and an electronic Kindle version for \$141.56. The paper version has 904 pages and weighs 4.2 pounds.

Although teachers and students hope that digital textbooks will mean lower prices, textbook publishers “price very aggressively,” says Raff. A 2005 Government Accounting Office study of textbook

prices found that publishers raised prices an average of 6% a year in the previous two decades—twice the rate of inflation and nearly as fast as the 7% annual increase in college tuition. Raff predicts, however, that with Amazon and Apple competing to deliver content, pricing will come down.

Publishing industry insiders say privately that they could realize higher profits despite much lower prices if digital downloading eliminated the used and rental book market along with the costs of printing and stocking paper books. They say they could prevent book sharing by forcing students to do workbook exercises linked to their textbooks. Many already offer their texts directly from their own web sites, sometimes at prices lower than CourseSmart, which means that none of the book’s price goes to bookstores or online sellers.

But digital readers could also make it easier for new entrants in the market. Amazon or Apple could become textbook publishers themselves, using their recommendation engines to replace textbook salesmen in reaching out to teachers. Some teachers might be more open to assigning open-source textbooks from the Wikimedia foundation if they were on digital readers that students already owned.


At the college level, professors are already intrigued by the idea of creating custom textbooks for a course by assigning a few chapters from one book, a few chapters from another, and some articles and original source material. Such modular textbooks are available in paper form, but they haven’t been popular, partly because they look odd given their many different type-faces and formats. In the digital world, it should be easier to create such customized textbooks, but licensing copyrights will remain challenging.

Textbook publishers currently handle such tasks and custom print textbooks for individual classes. For example, Pearson’s custom library group lets professors go online to create a book, mixing and matching chapters from several of its textbooks in subjects. Professors can include up to 20% outside material, whether written by them or chosen elsewhere, with Pearson managing permissions.

Highlighting Key Passages

Digital textbooks will need to have features students take for granted in paper books, such as the ability to highlight key passages and take notes that can be attached to pages. Digital versions also need consistent pagination so that teachers can give assignments. Even with a search function, digital books will still need tables of contents, indexes and glossaries.

Even with these limitations, digital presentation opens up a number of new possibilities for textbooks. With interactive graphs in an economics book, for example, students could try different costs to see the impact on demand or different supply levels to gauge the change in price. ScrollMotion promises publishers that its technology will let them embed video that students can watch, record lectures linked to chapters and offer self-assessment tests.

“You will see more up-to-date textbooks that incorporate cutting-edge research without waiting for the next edition,” says Bradlow. Publishers may build communities of expertise around their digital textbooks with the ability to post comments or questions. As Bradlow notes, “It’s not static content anymore.” 



Google's Nexus One Aims to Disrupt the Wireless Industry

Google launched the Nexus One “superphone” early in 2010 amid some breakthrough marketing claims that it is “as powerful as your laptop computer of three to four years ago,” as Google’s vice president of engineering, Andy Rubin, put it. But the Nexus One is intended to break down other barriers, too. As part of the new phone’s marketing push, Google opened an online store to sell the phone independently from wireless service providers that operate as device gatekeepers under the traditional sales model.

The goal: Break down distribution barriers and sell the Nexus One directly to consumers. Consumers can buy the phone through Google’s web store as Nexus One unlocked for \$529—separate from carrier service. But one can also buy the phone for \$179, the Nexus One under a two-year contract from T-Mobile. And Google announced it would offer more devices through its web store in the future.

The honeymoon didn’t last long, however. Google quickly encountered a deluge of customer service complaints about everything from wireless network coverage to buggy touchscreens that wouldn’t allow customers to type, batteries that didn’t hold a charge and high fees associated with returns. These problems were compounded by the fact that customers

could only communicate with the company through online forums and email—not through live customer service agents.

“When a company is completely virtual and then decides to sell physical goods directly, it’s a different [set of challenges],” says Sergei Netessine, a Wharton professor of operations and information management. “It’s certainly an attractive thing to sell a product yourself without intermediaries, but the customer inevitably comes back to you.”

Yet while Netessine and other experts acknowledge that Google’s Nexus One got off to a somewhat rocky start, the company could still be successful in the long run, they say. The bigger question is whether Google can alter the economics of an industry where the wireless carrier dictates the selection

of devices consumers can buy—and whether consumers will be willing to pay a premium to shop for devices that are free from carrier constraints.

Removing the Gatekeepers

“Is [the Nexus One] going to be the product that opens up the mobile space?” asks Kendall Whitehouse, director of new media at Wharton. “Google wants to release the grip that carriers have on devices and [bring us to] a world where you pick handsets and carriers without a contract.” Typically, wireless phone customers in the U.S. buy a device tethered to a two-year contract through “gatekeeper” carriers such as Verizon Wireless, AT&T, Sprint and T-Mobile. In many other countries, customers buy phones separate from the carrier.

Google also wanted more control over the customer experience, so the company set out to sell its own device and tightly integrate the hardware and software.

HTC, a prominent mobile device company based in Taiwan, manufactured the Nexus One based on Google's specifications. Formed in 1997, the company is known for innovative handset designs and is one of the early adopters of Google's Android operating system. The product is viewed as a collaborative effort, and each company has a logo on the back of the Nexus One.

For now, however, the Nexus One primarily works with T-Mobile's network in the U.S. Verizon Wireless began to support the Nexus One in spring 2010. What's unclear is whether Google's effort will truly open up the mobile market, enabling the Nexus One to compete with the top contender in the smartphone category—Apple's iPhone. Will Google's model mean that consumers will focus more on the device itself, instead of viewing it as part of a package with a service provider? And will they pay a premium—say,

Google credit for going against the grain, but what it's doing just isn't [likely to make] much of a change."

David Hsu, a professor of management at Wharton, argues that Google missed a big opportunity to alter the mobile landscape. The company's approach—selling an unlocked phone so consumers can buy it without a carrier contract—has also been taken by device makers such as Nokia and Palm, he points out. According to Hsu, Google's real opportunity would have been to take a loss on the Nexus One and sell it at a cutthroat price to gain market share for its Android platform.

Google needs more consumers on its Android platform to drive more usage of the search giant's services—including Google Maps, its Google Voice service that aggregates multiple phone numbers into one application, and YouTube—and consequently more views for the ads that go with them, Hsu says. "The company's model depends on getting people to use the device. Google should have massively subsidized the phone and sold it for

industry buzz ahead of its early January introduction, making it hard for the Nexus One to live up to the hype. However, customers who were dissatisfied with the phone's performance faced an unusually confusing retail model. For instance, Google's help page instructed customers to email the company for questions about orders, charges, returns and their accounts. The company also instructs customers who have hardware, return and repair issues to contact HTC, which includes phone numbers on its own support page. Service questions are directed to T-Mobile, which features a helpline prominently on its help page.

Under the subsidized handset model, customers primarily deal with the carrier, who coordinates the resolution of problems through live representatives. But in the case of Nexus One, if a customer was unsure of the nature of his problem, he could be bounced between three parties.

Faulhaber says that Nexus One customers had a problem finding "one throat to choke" if they had a problem. "What if the

"There will be one-click access to Google search, YouTube, Picasa, etc. There may not be similarly easy access to competitors' offerings."

Eric Clemons
Operations and Information Management
Professor, Wharton



\$500 for a phone compared to \$199—for a handset free from carrier constraints?

Gerald Faulhaber, a Wharton professor of business and public policy, says it's unlikely Google can convince consumers to give up subsidized phones. "Subsidies are attractive to a lot of people," he notes. Wharton marketing professor Peter Fader agrees that consumers will be slow to change their approach to purchasing handsets. "Yes, consumers should have more variety and choose whether they want to be locked into a contract, but the vast majority of people don't care. I give

\$100, unlocked. It's not like Google has a cash problem."

Some have speculated that Google might eventually give away phones. At Google's press event, one reporter asked, "Where's my ad-sponsored phone?" Whitehouse notes that although we're still a long way from that point, it's intriguing to consider how low Google would go to reduce the price in an effort to gain market share.

'One Throat to Choke'

Google's new device garnered a lot of

phone stops working—who are you going to call?" he asks. "Usually, it's the carrier that takes care of everything. Anybody can buy their own cable set-top box, but there's a reason most people just take what the cable company gives them: Service."

Meanwhile, some customers' hackles were also up over the Nexus One's "equipment recovery" fee. Google charges consumers \$350 if they return the Nexus One within the first 120 days of carrier service. The fee is in addition to the early termination fee a customer

would pay his carrier. According to Google, the equipment recovery fee “is not a penalty but is for liquidated damages Google will incur as a result of such cancellation.”

According to Wharton legal studies and business ethics professor Andrea Matwyshyn, Google’s failure to provide good customer service could hurt the goodwill the company has built up with customers over the years. “Perhaps Google hasn’t thought through the possible negative goodwill impact of engaging in direct sales of handsets,” she says. “I’m surprised they are entering the business this way.”

Hsu adds that retail logistics are outside of Google’s core competency. “Apple sweats the details, but Google doesn’t have those multiple points of contact with consumers. It appears that Google has underestimated the retail, logistics and customer service involved” in such an operation.

According to Netessine, Google is making many of the same mistakes made in the 1990s by early Internet retailers, many of whom tried to do all support via email. However, that approach rarely works, he notes. Customers want phone support. “You have to think carefully about putting real customer support in place and the costs associated with it. If you don’t, you’re better off selling through an intermediary.” It’s too early to determine whether Google will make a big investment in selling phones direct, but Netessine notes that if the company is serious, it will have to spend money on things like call centers and support reps—especially if it offers more Google-branded devices in the future.

Ads and Android

Experts at Wharton say there are multiple reasons for Google’s willingness to strike out in new territory like direct sales of handsets, risking the ire of consumers. Top among them: to gain more traction for Android. “Overall, Google had to be a little dissatisfied with the pace of the uptake and innovation around Android,” Hsu says. Indeed, in a statement, Google said that the Nexus One is designed to show what Android can do if the search giant is in charge of integrating its software, web services and hardware.

For now, the mobile market for ads, software and services is a land grab. “Everybody knows smartphones are going to be the next big platform,” says Whitehouse. “[Mobile devices] will be where people spend most of their time online in the future.”

Faulhaber agrees. “Google recognizes that the wireless market is the next Internet. The standard model of a PC accessing the Internet is a mature market. Google has to position itself for the future. It doesn’t want to be Microsoft, which is a PC-based company.” Overall, Faulhaber says Google has navigated the mobile industry well in its quest. Its Android platform is now powering a wide range of devices, and Verizon, T-Mobile, Sprint and AT&T have Android-powered smartphones, or plans to introduce them in 2010. In addition, while Google’s catalog of 18,000 applications for Android is smaller than Apple’s collection of more than 100,000 apps, it is solidly in second place.

As with all things Google, the company’s ultimate strategy with mobile devices revolves around advertising, data and referring consumers to businesses, says Eric Clemons, an operations and information management professor at Wharton, who argues that the search giant really sells customer access. “Google reads my texts, and it knows that I am hungry. Google knows where I am. It knows that my friend, with whom I am swapping texts, likes Thai food. Voilà, a text appears from Google offering me a discount on a Thai restaurant quite close to where I am.”

The catch? To achieve that integration, Google needs to control multiple parts of the mobile food chain and put those parts together seamlessly. “It is about [having] all the Google pieces work together,” says Clemons. “There will be one-click access to Google search, YouTube, Picasa, etc. There may not be similarly easy access to competitors’ offerings.”

In addition, Google needs a mobile hit to prevent Apple from gaining an advantage in mobile advertising. Google recently announced plans to acquire mobile advertising firm AdMob for \$750 million. Apple countered with the acquisition of Quattro Wireless, another mobile ad specialist. Apple didn’t disclose what it paid for Quattro Wireless, but reports price the deal as high as \$275 million.

Experts at Wharton say they expect to see Google and Apple experimenting with mobile advertising formats. “Mobile advertising will have to be creative,” says Fader. “It won’t be just banner ads. The other extreme—which is having your phone shout at you as you walk by a Starbucks—won’t work, either. What will work is a new, clever approach.”

Google: Friend or Foe?

How Google’s relationship with wireless carriers plays out remains to be seen. Some experts expect that Google will push a vision in which carriers become so-called “dumb pipes”—where all the value-added services are delivered via software and web services, while carriers become a mere conduit for wireless access.

That said, the two parties still need each other. “Google and the carriers have a complicated relationship,” says Whitehouse. For instance, Google has argued that some wireless spectrum should be opened up for free use. However, carriers have spent billions of dollars to acquire the spectrum they already have. “Google is a strong partner with an attractive platform that looks good to carriers, but you have to wonder how this works out longer term,” Whitehouse adds. However, he doesn’t see the relationship between carriers and Google as a zero-sum game. “Carriers will still get revenues from subscription fees and a slice of applications and advertising revenues. It’s not ‘winner takes all’—but carriers will need to keep a close eye on Google.”

According to Faulhaber, Google and wireless carriers will develop two tiers in their relationship. On the product front, the two parties will cooperate. “Everyone needs to do business with Google, so it’s a friend,” he says. However, “in the regulatory environment, Google is not a friend to carriers. Google wants net neutrality, dumb pipes and shared spectrum. For carriers, Google [needs to be] viewed dangerously in Washington.”

Matwyshyn says it’s good that Google has a complicated relationship with carriers, so it can innovate and push the industry to open up more. Ultimately, she notes, “we’ll see what the market says, but Google’s moves can provide consumers with more choice.”



Early Tremors: Is It Time for Another Social Network Shakeout?

Social networking is undergoing incredible growth—and growing pains. Facebook serves more than 400 million people worldwide as of February 2010. That number had doubled in just 10 months and for the first time placed Facebook ahead of the 800-pound gorilla—search engine Google—when it comes to homepage visits in the United States. Facebook in one recent week recorded about 7% of all internet traffic in the U.S., up from 2% in a comparable 2009 period.

But faint rumblings have begun in the social networking landscape. Facebook acquired smaller rival FriendFeed in August 2009. Friendster, viewed as an also-ran in the U.S., has refocused its operations on the Asia-Pacific region, where it is among the leaders in traffic. News Corp., owner of MySpace, has reshuffled executives and restructured the unit as traffic growth slows. Experts at Wharton say that these moves and others may be the first hints of a shakeout in the social networking market.

Social networking sites allow individuals to connect online and share content like photos and video, and the best-known social networking site today is clearly Facebook.

When Knowledge@Wharton wrote about social networking sites back in May 2006, experts noted that some high-fliers may go from “hot” to “not” quickly. (See: “MySpace, Facebook and Other Social Networking Sites: Hot Today, Gone Tomorrow?”) Since then, an initial shakeout has taken place. For instance, Yahoo

launched an effort called Yahoo 360 in 2005, only to shut it down in July 2009 after it failed to gain traction. The once-hot MySpace couldn’t keep up its torrid growth and has been one of the few social networking sites to see traffic fall. Bebo, founded in 2005, was acquired by AOL in 2008 for \$850 million in cash. And in 2006, no one even knew microblogging site Twitter was coming.

What’s unclear is where social networking goes from here. Experts at Wharton say there’s still a lot of growth left in the sector, but a round of consolidation, reinvention and restructuring is likely in the not-too-distant future. “Clearly, social networking has caught on in a great way, but there’s still a lot of uncertainty about where all of this will wind up,” says Wharton management professor Saikat Chaudhuri. “The market is very dynamic.”

For instance, Facebook’s acquisition of FriendFeed revolved largely around a talent and technology grab. FriendFeed

provides innovative features such as aggregating status updates from multiple social networking sites and real-time searching of social content, but failed to gain significant traffic. Research firm Hitwise noted that Facebook was the top-rated social network in August 2009, whereas FriendFeed ranked 421 in the category. In a statement, Facebook said all 12 FriendFeed employees would join the company and its founders would have senior management roles. Facebook CEO Mark Zuckerberg said he admired FriendFeed's ability to create "such a simple and elegant service for people to share information."

Indeed, experts at Wharton expect the Facebook-FriendFeed scenario to play out repeatedly in the next few years. New services will emerge and be absorbed into winning platforms for their features, engineering skills or both. There is room for new entrants, but less than there was three years ago. "The appeal is narrowing for some social networks," says Wharton legal studies and business ethics professor Andrea Matwyshyn. Why? Consumers only have time for so many social networking sites and are likely to gravitate where they already have friends, she says.

Kendall Whitehouse, director of new media at Wharton, notes that "social networking sites are still popping up" but with questionable prospects. However, these sites could be a source of new features for larger players. "I think we are starting to see the beginning of consolidation." Adds Wharton marketing professor Peter Fader: "Clearly, there are too many social networking sites." A number of them have evolved to aggregate consumers' social profiles at various networks, he notes. "Just the fact that those [aggregation] businesses exist means there are too many" independent sites.

Multipurpose Sites with Scale

Eric Bradlow, a marketing professor at Wharton, says an upcoming round of consolidation may include a good bit of reinvention as social networking sites tinker with business models. "The big question today is: How will social networking and social media sites monetize themselves? Turning themselves into social commerce sites will be very difficult."

What's likely to emerge is a social networking market where there are multipurpose

sites that have vast economies of scale, like Facebook and MySpace, and niche players, like LinkedIn, that find profitable business models, says David Hsu, a Wharton management professor. "People will go with the large social networking sites, but there will be very niche commu-



"The bubble hasn't popped yet and there's tremendous value in social media. But it's wishful thinking to [believe] that others on the 'me too' bandwagon will survive."

Peter Fader, Wharton Marketing Professor

nities that will also be successful. The companies in the middle will be squeezed."

However, these market dynamics may take time to play out. Some social networks in the middle of the pack—such as Ning and Hi5—have shown solid growth figures, according to comScore. Meanwhile, many leading social networks fill viable roles that don't overlap with other services, so there's no immediate need for consolidation, says Matwyshyn.

According to comScore's August data, the top three social networking sites in the current U.S. market are Facebook, MySpace and Twitter. MySpace, which is increasingly focused on becoming an entertainment portal as well as a social networking site, is in flux, but is still the second-largest social networking site, according to comScore. In third place sits Twitter, launched in 2006, which had 20.8 million unique users in August—up 1,773% from a year ago.

In addition to Ning and Hi5, the vast middle includes sites like Digg.com, Classmates.com, MyLife, Bebo and LinkedIn. Andrew Lipsman, director of industry analysis at comScore, notes that it's simplistic to rank social networking sites based on size. For instance, LinkedIn had 8.74 million unique users in August, but that's up 67% from a year ago. The company, which says it is profitable, has benefited from the economic downturn as people increasingly use LinkedIn to look for employment. "The business-oriented social networking site has become more important than ever for those looking for job opportunities and it has the growth to show for it," he says.

Lipsman also highlights Ning, a service that allows people to create their own social networks based on their interests, as another niche player that has posted impressive growth with 5.48 million unique users in August—up 96% compared to a year earlier. According to the company, there are more than 1.5 million Ning networks. "Even in the U.S., the most mature market for social networking, there is user growth at every category level," says Lipsman.

Experts at Wharton, however, question how long that growth can last. "The bubble hasn't popped yet and there's tremendous value in social media," says Fader. "But it's wishful thinking to [believe] that others on the 'me too' bandwagon will survive."

Emerging Business Models

The profit potential for social networks could be impressive—as long as these companies find a working business model. Most companies in the social networking space are still experimenting with ways to generate revenue. The Holy Grail, according to Bradlow: Highly personalized advertising and word of mouth marketing.

But that prized marketing goal may prove elusive. “Can [social networks] eventually sell products tailored to the individuals on their sites?” asks Bradlow, adding that even the leading players like Facebook wrestle with the question. “I think it will be very hard for firms that are well established to make that transition. So where do they make the revenue?”

Nevertheless, that transition is happening as social networks begin to define their specialties—and as business models are refined, some reinvention will be in order. For instance, MySpace and its parent News Corp. have undergone a series of top management changes over the last year. News Corp. CEO Rupert Murdoch said on an earnings conference call in August that MySpace will focus on its core competencies. “For MySpace, we think music, we think games, we think video. And we’re going to improve those in every way we can.” Indeed, MySpace also revamped its MySpace Music team and is positioning itself as an entertainment hub with original content series and an online game show. Most of MySpace’s services are ad supported.

Bradlow says that increased specialization with continued experimentation is warranted. After all, there are multiple business models to consider. According to Bradlow, social networking companies could sell applications (like Apple’s iTunes Store does), aggregate massive audiences for advertisers or target high-value consumers that are coveted by Madison Avenue. Another option: Sell behavioral data to advertisers. Many networks are using variations of those themes. For instance, Twitter, which doesn’t yet have any meaningful revenue, has been targeting businesses with tutorials on how to use its services as a customer-monitoring and service tool. Facebook, which noted in August that it has turned cash-flow positive, can aggregate a large audience, but also wants to harness its user information in what it believes is a privacy-friendly way.

While most social networks won’t become the size of Facebook, there are other options to make money for smaller, more focused rivals. Smaller players can target groups that are highly coveted by marketers. For example, Ning’s collection of niche social networks could be valuable to advertisers. By providing tools to enable targeted social networking, the site has been able to grow at a rapid clip. “Ning is carving out an interesting niche,” says Lipsman.

Other social networks are focusing on business uses and providing tools for advertisers and any company that wants to monitor its brand. “Social networking is becoming a business beyond consumer use,” says Chaudhuri. “The government and businesses are using it to communicate and companies are getting into it.” Given that trend, experts at Wharton say most social networks are likely to develop models that revolve around serving so-called “enterprise customers”—companies looking for intelligence about their products and reputation. “The challenge, particularly for enterprise customers, is to figure out how many of these sites they should pay attention to and provide content to,” says Whitehouse.

Indeed, the focus on business intelligence could help some of the smaller social networks thrive. For instance, LinkedIn has a recruiter product for human resources professionals, designed to find “passive candidates,” or people not actively looking for jobs who could be good hires. LinkedIn charges a fee per user for the recruiting service and counts Allstate, eBay, Logitech and Kaiser Permanente as customers. The site also launched a survey business so customers can poll the professionals that use its social network. Forrester Research, a technology research firm, formed a survey partnership with LinkedIn in August.

Those revenue streams are in addition to advertising on the LinkedIn site. “Certainly, there are revenue opportunities that haven’t been explored,” says Matwyshyn. “LinkedIn

could also facilitate conference calls and develop new business communities.”

Vast Potential and Pitfalls

As social networking companies continue to experiment with business models, the formula will be different for each one, Wharton faculty say.

For instance, Friendster, an early social networking site with a small market share in the U.S., has revamped to focus on its strongest geographic area—the Asia-Pacific region. Friendster announced plans to expand in Singapore, the Philippines and other locales in the region. In the U.S., Friendster had 2.1 million unique users in August, compared to 13.7 million in Southeast Asia, according to comScore. At the end of 2009, however, Friendster was acquired by MOL Global Pte. Ltd.

Even the giant, Facebook, is still finding its business model. In 2007, Facebook launched a service called Beacon that was designed to track users’ activity on external sites and deliver more targeted ads. After privacy complaints, Facebook continued to tweak Beacon before ultimately shutting it down in September. “Privacy will play an increasingly important role in these models,” says Matwyshyn. “For these sites, user information is their most valuable asset, and that lends itself to being licensed or leveraged.” The real trick will be finding the balance between privacy and profit.

Ultimately, consumers may determine how quickly the social networking industry consolidates. “It’s a race in terms of finding how much new value can be added [to social network business models],” says Hsu. “As a user, I only have the time to allocate my mindshare to one or two.”

Matwyshyn agrees. “Consumers are seeing less benefit of building out profiles on smaller networks. The choice is to gravitate toward a major player like Facebook, because it’s more efficient and you get more bang for your minute.” 🗣️



Online Social Networks Make It Easier to Bypass Personal Security Barriers

A generation is growing up with social networking web sites such as Facebook and MySpace, casually posting accounts of their lives for their friends—and the world—to see. Few of these users realize that the information they post, when combined with new technologies for gathering and compiling data, can create a fingerprint-like pattern of behavior. The information provides opportunities not only for legitimate business purposes, but also for the nefarious aims of identity thieves and other predators, according to faculty at Wharton and elsewhere.

“The way privacy has traditionally been defined is being challenged,” according to Wharton legal studies professor Andrea Matwyshyn, who last year organized the Information Security Best Practices Conference at Wharton. Among other topics, the conference addressed security and safety issues raised by the social networks.

Research on online social networking and how it may alter privacy norms is just beginning, according to technology observers. “Our kids today will give everything [in terms of personal information] away, but it’s not at all clear how this will shake out in the long run,” says Wharton marketing professor Peter S. Fader. “Privacy is a moving target.”

Researchers say that privacy thresholds vary by individual and that those boundaries are being tested by social networking. It is hard, they say, to pinpoint the exact impact of social networking on the Web. However, it is clear that individuals are increasingly using these sites to keep in touch with friends, find jobs and enhance their careers. One example of the torrid growth in social networking sites: Facebook had more than 400 million users worldwide in early 2010. The number of Facebook users had doubled in just 10 months and surpassed even the amount of Google users for U.S. homepage visits.

Lance Hoffman, a George Washington University computer science professor who spoke at the Wharton conference, noted that by giving up such information as their name, birth date, and a list of their network of friends, users are revealing far more than they know. Third-party applications, he argued, can take that data outside of the friendly confines of a social networking site

and combine it with data from other sources to piece together enough information to steal a person's identity. Just a person's name and birth date—routinely found on a Facebook profile—can be a useful lever for an identity thief, said Hoffman.

"I've had students who used third-party applications that took friends of friends and used facial recognition to identify them," explains Hoffman. "They didn't know what to do with the information, but someone else might. What happens when the collecting of this information is automated?"

At the conference, Hoffman illustrated how social connections are made online and the ease with which a stranger can become part of a network. He noted that he is regularly added to mailing lists and invited to become a friend—or "friended" in the social network parlance—of businesses that use the sites as a marketing tool. Indeed, pages used by businesses on Facebook were recently redesigned to look more like those of individuals.

In addition, the line between professional networking on a site such as LinkedIn, and social networking on sites such as Facebook, "has become very thin," said Hoffman. Many Facebook users might create a more casual persona for themselves on that site than they would on LinkedIn, where they would include nothing but professional information. But both sites can be seen by potential employers and clients—and complications can ensue. One such complication: When a business contact from the LinkedIn world wants to become your friend on Facebook, do you accept the invitation, giving them access to the photos on your Facebook profile from last summer's rowdy beach party?

And what about the person you don't really know who wants to be your friend because you have some friends in common? According to Hoffman, that new friend may just be mining your social circle for information. As networks grow and more friends of friends (and their friends) are accepted by users, it's unclear who can be trusted.

Ultimately, social networking security rests with each user of the service (those friend invitations can always be declined). Hoffman recommended that social network denizens know the privacy policies—governing, among other things, how the information you provide can be used—of the sites they frequent.

At the same time, Hoffman said, web site operators need to make privacy policies

easier to understand. "Privacy policies differ in theory and practice. In theory, consumers know about a site's privacy policy and trust the network. The reality is that no one reads the policies. I don't read them myself." Hoffman cited Facebook's privacy policy—which promises that users have control over their data and what information is shared—as typically murky. (A recent version was more than 3,700 words—more than twice as long as this article.) Hoffman advocates new formats for privacy policies that act as simplified "nutrition labels," like those on food products.

Private Here, Not There

Research conducted by Alessandro Acquisti, a Carnegie Mellon University professor of public policy and management who also spoke at the conference, has found that individuals' notions of privacy are malleable depending on the context of an interaction. According to Acquisti, people are more likely to divulge key personal information—their photo, birthday, hometown, address and phone number—on social networking sites than they would on other web sites. His 2005 study highlighted privacy concerns such as online and physical stalking.

"People [say] privacy [is] important to them, yet they engage in behaviors that indicate a remarkable lack of concern," Acquisti told the conference participants. "Privacy decision making and valuations are malleable," but it's unclear what factors lead to more disclosure. One of those factors might be a "herding effect," he said. In one study, Acquisti found that that people will divulge information when they see others doing so. That tendency, he believes, may explain why so many people are willing to dish out personal information on the networks.

Information gleaned from such sites is useful not only to identity thieves, but to marketers and other legitimate business interests. Sometimes, the information can be used to find thieves, according to research co-authored by Shawndra Hill, a Wharton professor of operations and information management, and AT&T researchers Deepak K. Agarwal, Robert Bell and Chris Volinsky. Hill says a person's pattern of behavior on various networks can reveal tell-tale signatures, similar to fingerprints—or perhaps "friendprints"—that can be used to solve a wide range of business challenges, from targeted marketing and advertising to fraud detection.

The study, titled "Building an Effective Representation for Dynamic Networks," originated as an approach to fraud in the telecommunications industry. The authors were interested in the problem of identifying phone service subscribers who repeatedly default on their bills by signing up for service under an alias. The problem is not new. However, the focus of the paper was to show how to clearly identify a customer's social network signature and match it to signatures created by customers who had previously defaulted. "Repetitive defaulters may be identified despite their aliases over time by their 'social network signature,'" according to the paper.

"In other words, consumers are who they call, e-mail or IM," says Hill. "Though it is not difficult to sign up under an alias, it is extraordinarily difficult to change one's friends and family." Large telecommunications firms, Internet providers and social networking sites such as MySpace and Facebook may have rich sets of data in which social network signatures can be identified. Hill says the technique is still being perfected; its accuracy rate recently was put at about 95%.

Still, the security and privacy questions pose tricky issues for marketers, who have been looking for successful social network advertising models. Research firm eMarketer estimated last year that spending on such advertising would be about \$1.29 billion in 2009. MySpace garners half of the revenue pie. Social network advertising is only a small slice of the projected \$25.7 billion spent on online ads in 2009, according to eMarketer.

Wharton marketing professor Eric T. Bradlow says the Holy Grail for marketers is to track consumers and their friends—and what they say about a product—via social networks. "People are more willing to divulge information for social purposes, and the lead users are 18 to 25 years old," Bradlow notes. "The social norms around privacy aren't going to be what they were before."

But just as Acquisti noted, acceptable social norms will be subject to context. "Let's imagine that a credit card company had the information you put on Facebook," Bradlow says. "You'd be appalled. It's context. People want to say when and where data is shared." 