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On Facebook, Scholars Link Up With Data

By [STEPHANIE ROSENBLOOM](#)

Each day about 1,700 juniors at an East Coast college log on to [Facebook.com](#) to accumulate “friends,” compare movie preferences, share videos and exchange cybercocktails and kisses. Unwittingly, these students have become the subjects of academic research.

To study how personal tastes, habits and values affect the formation of social relationships (and how social relationships affect tastes, habits and values), a team of researchers from [Harvard](#) and the University of California, Los Angeles, are monitoring the Facebook profiles of an entire class of students at one college, which they declined to name because it could compromise the integrity of their research.

“One of the holy grails of social science is the degree to which taste determines friendship, or to which friendship determines taste,” said Jason Kaufman, an associate professor of sociology at Harvard and a member of the research team. “Do birds of a feather flock together, or do you become more like your friends?”

In other words, Facebook — where users rate one another as “hot or not,” play games like “Pirates vs. Ninjas” and throw virtual sheep at one another — is helping scholars explore fundamental social science questions.

“We’re on the cusp of a new way of doing social science,” said Nicholas Christakis, a Harvard sociology professor who is also part of the research. “Our predecessors could only dream of the kind of data we now have.”

Facebook’s network of 58 million active users and its status as the sixth-most-trafficked Web site in the United States have made it an irresistible subject for many types of academic research.

Scholars at Carnegie Mellon used the site to look at privacy issues. Researchers at the [University of Colorado](#) analyzed how Facebook instantly disseminated details about the [Virginia Tech](#) shootings in April.

But it is Facebook’s role as a petri dish for the social sciences — sociology, psychology and political science — that particularly excites some scholars, because the site lets them examine how people, especially young people, are connected to one another, something few data sets offer, the scholars say.

Social scientists at Indiana, Northwestern, Pennsylvania State, [Tufts](#), the [University of Texas](#) and other institutions are mining Facebook to test traditional theories in their fields about relationships, identity, self-esteem, popularity, collective action, race and political engagement.

Much of the research is continuing and has not been published, so findings are preliminary. In a few studies, the Facebook users do not know they are being examined. A spokeswoman for Facebook says the site has no

policy prohibiting scholars from studying profiles of users who have not activated certain privacy settings.

“For studying young adults,” said Vincent Roscigno, an editor of *The American Sociological Review*, “Facebook is the key site of the moment.”

Eliot R. Smith, a professor of psychological and brain sciences at [Indiana University](#), and a colleague received a grant from the [National Science Foundation](#) to study how people meet and learn more about potential romantic partners. “Facebook was attractive to us because it has both those kinds of information,” Professor Smith said.

S. Shyam Sundar, a professor and founder of the Media Effects Research Laboratory at [Penn State](#), has led students in several Facebook studies exploring identity. One involved the creation of mock Facebook profiles. Researchers learned that while people perceive someone who has a high number of friends as popular, attractive and self-confident, people who accumulate “too many” friends (about 800 or more) are seen as insecure.

In “The Benefits of Facebook ‘Friends,’” a paper this year in *The Journal of Computer-Mediated Communication*, Nicole Ellison, an assistant professor at [Michigan State University](#), and colleagues found that Facebook use could have a positive impact on students’ well-being. (Note to parents: in an earlier paper the researchers found no correlation between grade-point average and intensity of Facebook use.)

An important finding, Ms. Ellison said, was that students who reported low satisfaction with life and low self-esteem, and who used Facebook intensively, accumulated a form of social capital linked to what sociologists call “weak ties.” A weak tie is a fellow classmate or someone you meet at a party, not a friend or family member. Weak ties are significant, scholars say, because they are likely to provide people with new perspectives and opportunities that they might not get from close friends and family. “With close friends and family we’ve already shared information,” Ms. Ellison said.

Ms. Ellison and her colleagues suggest the information gleaned from Facebook may be more accurate than personal information offered elsewhere online, such as chat room profiles, because Facebook is largely based in real-world relationships that originate in confined communities like campuses.

Mr. Sundar of Penn State agreed. “You cannot keep it fake for that long,” he said. “It’s not a [Match.com](#). You don’t make an impression and then hook somebody.”

But some scholars point out that Facebook is not representative of the ethnicity, educational background or income of the population at large, and its membership is self-selecting, so there are limits to research using the site. Eszter Hargittai, a professor at Northwestern, found in a study that Hispanic students were significantly less likely to use Facebook, and much more likely to use [MySpace](#). White, Asian and Asian-American students, the study found, were much more likely to use Facebook and significantly less likely to use MySpace.

Facebook began in 2004 at Harvard and was restricted to students until 2006. As Ms. Hargittai points out in her paper, “Requiring such an affiliation clearly limited the number and types of people who could sign up for the service in the beginning.”

Most researchers acknowledge these limits, yet they are still eager to plumb the site's vast amount of data. The site's users have mixed feelings about being put under the microscope. Katherine Kimmel, 22, a graduate student at the [University of Cincinnati](#), said she found it "fascinating that professors are using something that started solely as a fun social networking tool for entertainment," and she suggested yet another study: how people fill out Facebook's "relationship status" box. "You're not really dating until you put it on Facebook," she said.

But Derrick B. Clifton, 19, a student at Pomona College in California, said, "I don't feel like academic research has a place on a Web site like Facebook." He added that if it was going to happen, professors should ask students' permission.

Although federal rules govern academic study of human subjects, universities, which approve professors' research methods, have different interpretations of the guidelines. "The rules were made for a different world, a pre-Facebook world," said Samuel D. Gosling, an associate professor of psychology at the University of Texas, Austin, who uses Facebook to explore perception and identity. "There is a rule that you are allowed to observe public behavior, but it's not clear if online behavior is public or not."

Indiana University appears to have one of the stricter policies. Its Web site states that the university will not approve academic research without permission from social networking sites or specific individuals.

Professor Hargittai of Northwestern conducted her Facebook study through a writing course that is required of all students at the [University of Illinois](#), Chicago. Some 1,060 participants answered survey questions on paper. Professor Ellison of Michigan State used a random sample of 800 undergraduates who were invited to participate via an e-mail message that included a link to an online survey.

Dr. Christakis of Harvard said he and his colleagues were studying the profiles of the East Coast college class with the approval of Harvard's Institutional Review Board, and with the knowledge of the unnamed college's administration — but unknown to the students being studied.

"Employers are looking at people's online postings and Googling information about them, and I think researchers are right behind them," said Dr. Christakis, a sociologist and internist who was an author of a study that received wide attention this year for its suggestion that obesity is "socially contagious." (The researchers did not use Facebook.)

Among other topics, the Harvard-U.C.L.A. researchers are investigating a concept, first put forth by the pioneering German sociologist Georg Simmel, known as triadic closure: whether one's friends are also friends of one another. If this seems trivial, consider that a study in 2004 in *The American Journal of Public Health* suggested that adolescent girls who are socially isolated and whose friends are not friends with one another experienced more suicidal thoughts.

"Triadic closure was first described by Simmel 100 years ago," Dr. Christakis said. "He just theorizes about it 100 years ago, but he didn't have the data. Now we can engage that data."

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