

No Longer Just Eggheads, Linguists Leap to the Net

Daniel Golden, Staff Reporter of THE WALL STREET JOURNAL, May 30, 2000

CAMBRIDGE, Mass. -- Near Harvard Square, in the cramped, sweltering office of Lexeme Inc., five former graduate students in **linguistics** can't stop laughing.

They've just come across a pun in their research -- someone describing a delicatessen as "unforgetabagel." Beneath the hilarity, they're also delighted to have abandoned academic wheel-spinning for the practical challenges -- and potential windfalls -- of an Internet start-up.

"It's like you're a biologist studying frogs. Then somebody who's building a big jumping car comes to you and says, 'You know about jumping things. I need your help,' " says Lexeme's Eric Groat.

Traditionally, a linguistics degree has been among the least marketable of academic credentials. Jobs, when they were available, paid about \$35,000 a year on the high end, usually in academia.

But now dozens of technology start-ups are commercializing linguistics research, and competing to hire the relatively small pool of specialists on the topic, which isn't even taught at many U.S. universities. Suddenly, linguists have their pick of jobs as lexicographers, "knowledge engineers" and "vocabulary-resource managers." For those with doctorates, the typical starting salary is around \$60,000, plus some stock. More highly trained talent is drawing more than \$100,000.

Mr. Groat received his doctorate from Harvard in 1998. But the 35-year-old couldn't land a tenure-track position in the Northeast, where he preferred to live. He taught for a year at the City University of New York and then at Harvard's extension school, his career seemingly stalled.

Then this spring, Mr. Groat tripled his income by joining closely held Lexeme, which counts 15 with doctorates in linguistics among its 30 employees.

They're building a sophisticated database -- including neologisms like "unforgetabagel" -- to help e-commerce customers navigate the Web.

Linguistics experts help e-businesses improve customer service by building so-called natural-language processing systems that can respond meaningfully to requests for help or information. With linguists developing the database or "lexicon," a system can distinguish between multiple meanings of words, relate groups of words by concept, and narrow the scope of a search by asking questions of the site visitor.

For instance, an online customer asking about shaving products might be asked whether he needs razors, blades or shaving cream before being directed to the appropriate Web site. As the Internet grows, such systems offer an alternative to the keyword searches done by conventional search engines, which can turn up hundreds of irrelevant responses.

To gain a recruiting edge, some employers are resorting to underwriting academic conferences, adding linguistics professors to their advisory boards, and holding pizza parties in university lounges. Or, they make financial contributions to the Linguist List, the premier job-referral Web site in the field, where postings are running nearly double over last year.

"Is there a demand? You bet there is," says Stanley Peters, chairman of linguistics at Stanford University. "Is there a supply? Heck no. The supply is extremely limited."

Linguists aren't accustomed to being wooed. A 1997 survey by the Modern Languages Association showed that only 28.4% of new Ph.D.s in linguistics found tenure-track positions, and only 52.5% received full-time teaching appointments -- worse than in such fields as English, classics and foreign languages. Nearly a fourth of the linguistics Ph.D.s were either unemployed or looking for a job.

And until recently, only a handful of companies hired any linguists at all, Microsoft Corp. the most prominent. Its linguists helped develop the grammar-checking function for Windows software. As the Internet becomes

increasingly global and multilingual, they are now trying to improve the quality of automated translation.

"When I came here in 1992, the attitude was, 'You're here for life, there's nowhere else to go,' " says Bill Dolan, a Microsoft researcher and linguistics Ph.D. from UCLA. "That's no longer true by a long shot."

Part of the problem: For decades, linguistics researchers in academia and government labs labored to create a computer with a human level of understanding of language. With that goal so elusive, some in the field have shifted to making systems that understand and converse within limited domains, such as finance or technology. In other words, commercially viable.

The heavily visited Ask Jeeves Inc. site has 10 linguists among its 600 employees. And the Emeryville, Calif., firm is trying to hire more. Smaller natural-language processing firms lean more heavily on linguists. Thirteen of 18 technical employees at closely held InQuizit Technologies Inc. in Santa Monica, Calif., hold linguistics doctorates or master's degrees. Ten of the 30 employees at closely held Cymfony Inc. in suburban Buffalo, N.Y., have linguistics Ph.D.s, including David Sanderson.

After receiving his doctorate in 1995 from the University of Toronto, Mr. Sanderson bounced from translating hockey news into French for a Stanley Cup Web site to teaching English as a second language, while his wife's insurance job paid most of the bills. Then he applied for a Cymfony opening posted on the Linguist List. He started working there a month ago, doubling his income, and plans to buy a house and car this summer.

The price is right, for both sides. What may seem a pittance in the New Economy amounts to a fortune for the long-suffering scholar. "We can go out and get linguists, sometimes with a master's education, for \$40,000 to \$45,000," says Michael Murphy, chief operating officer of Answerfriend.com in Los Angeles, where half of the 24-member technical staff have advanced degrees in linguistics. "They think they've died and gone to heaven. They're underpriced. Don't tell anybody."

Computational linguists -- who have a hybrid background in linguistics and computer science -- command the highest salaries: \$80,000 to \$130,000, and usually have an advanced degree. "I counsel a lot of linguistic sgraduate students," says Kent Clizbe, a former vice consul of the US Embassy in Malta who is now a headhunter specializing in recruiting linguists. "I tell them, 'You did your dissertation specializing in Cherokee semantics. Great. Now get as much of a computer background as you can.' "

Closely held AnswerLogic Inc., which is backed by Internet incubator CMGI Inc., is hiring and training what it calls "language lovers" -- recent college graduates with bachelors' degrees in linguistics or related fields. At \$30,000 a year plus stock options, they're cheaper than Ph.D.s, and the supply is larger. The Washington, D.C., firm uses natural language processing to automate customer support for technology companies.

The widespread emigration to business has shaken some colleges. Steven Chang, a graduate student in phonetics at the University of California at Berkeley, recently took a job at closely held BeVocal Inc., a Santa Clara voice portal that provides automated traffic and weather reports, news and stock quotes when subscribers dial its toll-free number.

Mr. Chang applied for a summer internship and was offered a full-time position "tweaking" BeVocal's system to recognize common mispronunciations. At the urging of his adviser, Prof. John Ohala, Mr. Chang intends to return to academe -- but only after his stock options are vested. "I'm concerned these companies may siphon off my students before they finish their degrees," Prof. Ohala says.

Michael Meacham expects to finish his dissertation at Berkeley this summer on the function of "-ma," a single word fragment that means "but" in Hittite, a dead language preserved on clay tablets from 1650-1200 B.C. Mr. Meacham, 37, hasn't started job hunting. But he's already received three feelers from tech companies, including AnswerLogic. The job market, he says, is "miyanz" -- the Hittite term for "abundant."

