

IMPACT

RESEARCH AT THE UNIVERSITY OF MARYLAND

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Today, there are almost 90 federal agencies that are rapidly upgrading and enhancing their language resources. For national security, the globalization of business, and a better understanding of the world we live in, the United States is investing heavily in improving the number and proficiency of its language specialists, while simultaneously pursuing new language-related curricula in our nation's schools and universities.

In this issue of *Impact*, we will examine how new research at the University of Maryland—combined with our partnerships with the federal government—addresses these critical language needs. We believe that a better understanding of language requires a much deeper awareness of culture and cognition.

The Centers for Language, Culture and Cognition will incorporate three major research thrusts—language and cognition, language and culture, and language and technology—and serve as a nexus to the major language-related research efforts at Maryland. We are uniquely positioned to provide this research, with very strong programs in linguistics, cognitive psychology and computer science, and specialized language resources like the Center for Advanced Study of Language and the National Foreign Language Center.

We encourage you to visit our Web site at www.umresearch.umd.edu for a more detailed look at language research at the University of Maryland. As always, your comments and suggestions are welcome.



Jacques S. Gansler
Vice President for Research

researchTRENDS

As one of the nation's premier public research universities, we are committed to scientific discovery that has a positive impact on our lives and our communities. Here are some of the recently funded projects we are working on:

PUBLIC HEALTH

Sarah Tishkoff, assistant professor of biology, received more than \$1.8 million from the National Institutes of Health to study certain sub-Saharan African populations to see if there is a genetic factor in providing a natural resistance to malaria.

GLOBAL COMPETITIVENESS

The Robert H. Smith School of Business received \$1.42 million from the U.S. Department of Education for a Center for International Business Education and Research (CIBER), which will provide superior education, research and assistance on issues central to building U.S. international trade and global competitiveness.

PUBLIC POLICY AND COMMUNITY OUTREACH

Philip Lee, senior fellow in the School of Public Policy, received \$1.2 million to develop a leadership-training program for the National Capital Park and Planning Commission that relies heavily on interactive forms of learning, including discussions led by scholar-practitioners.

HEALTH SERVICES ADMINISTRATION

Laura Wilson, professor and chair, Health Services Administration, and director, Center on Aging, received \$1.1 million in federal funding for research that is focused on expanding a community's capacity to offer respite care service to unserved and under-served populations.

To solve both theoretical and practical questions concerning language, scientists and linguists are now taking a much more interdisciplinary approach. To see what's new in language-related research, take a look inside ...



Removing the **Global Language** Barrier

Over time, advances in science and technology have dramatically improved our ability for communication. Gutenberg's 15th century printing press was instrumental in removing communication's time barrier—printed text could be read immediately or 100 years later. The Internet has overcome communication's distance barrier, allowing information to flow instantaneously to almost anywhere in the world.

One obstacle remains, however. "The last real barrier in global communication is language," says Richard Brecht, executive director of the University of Maryland Center for Advanced Study of Language, or CASL. In today's world, Brecht says, a much broader and deeper understanding of language other than English is critical for the United States. "There is no such thing as international business anymore, there is just business," he says in reference to maintaining the country's economic competitiveness. "And when American military lives are at stake on foreign soil, or we think about homeland security, then increasing the nation's foreign language capacity is a vital national security priority."

At the University of Maryland, new research to better understand language—how a second language is learned; how the human brain perceives language; the ability to quickly translate foreign languages using new technologies—is at the forefront of scientific discovery by Maryland faculty. "We've created a synergy at Maryland that is unparalleled—anywhere—for addressing real world problems through research in language, culture and cognition," says Brecht.

Within CASL, Brecht leads a group of dozens of Maryland faculty who partner with government experts on a wide range of language-related topics. Located at M Square, the University of Maryland Research Park, CASL conducts research that is, first, directed at government defense and intelligence agencies, with these results and other research data then made available to education and the private sector.

"Our main task at CASL is research that is directly aimed at improving the performance

of government professionals who deal with languages," says Brecht. This includes a better understanding of the various dialects of foreign languages, and experiments by cognitive psychologists to determine how stress and fatigue may affect the performance of government language specialists.

In the education domain, CASL's goal is to improve the effectiveness and efficiency of language learning in the nation's schools, colleges and universities. At the University of Maryland, CASL will help implement the National Flagship Language Initiative, a new government effort for universities to produce graduates with a "superior" level of proficiency in languages important to national security. Of the eight federal grants awarded thus far, Maryland has received three of them—for advanced language-learning programs in Arabic, Persian and Russian.

Better Healthcare Communication

M Square is also home to the National Foreign Language Center, or NFLC, which shares with CASL a role in assisting the federal government. Through its LangNet project, for example, the NFLC is providing e-learning materials in 33 different languages so that government language experts can maintain and elevate their skills. "We develop learning tools for federal agencies to train a significant number of people—at a very high proficiency level—in crucial foreign languages," says Catherine Ingold, director of the center

Historically, the NFLC has mainly been involved in education policy, but has recently evolved from policy-only, to a broader mission of policy, strategy and intervention for both



Catherine Ingold (right) help lead

(cont. on back)

researchPROFILES

For a closer look at Maryland faculty involved in three key areas of language research—culture, technology and cognition—go to www.umresearch.umd.edu.



MICHAEL LONG

This professor of second language acquisition is systematically investigating proficiency levels in those learning a second, or even third, language.



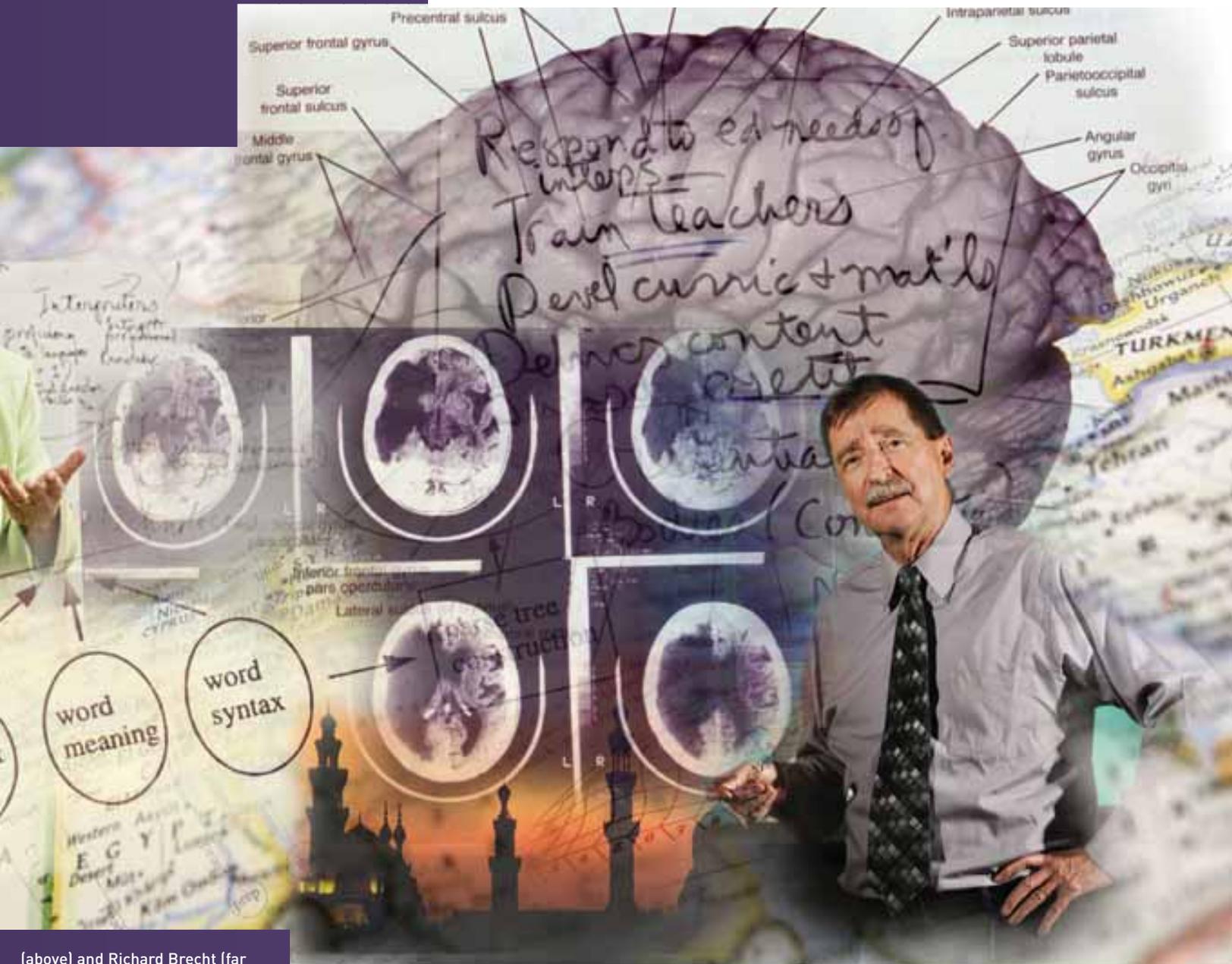
AMY WEINBERG

This professor of linguistics and computer science is developing new technologies for the machine translation of language.



DAVID POEPEL

This professor of linguistics and biology is studying how the human brain processes language at its most basic levels.



(above) and Richard Brecht (far left) are involved in language research at Maryland.

the federal government and the public sector. A key aspect of the NFLC is its ability to bring people together from different agencies to develop collaborative solutions for language-related problems.

An example would be the NFLC's research on the growing problem of language barriers in healthcare. There are an increasing number of people in the United States unable to adequately describe their symptoms—or understand healthcare advice—because of a poor understanding of English. “In many states, there are laws requiring that interpreters be available for this population, but these interpreters vary greatly in their level of competency,” Ingold says. The NFLC wants to build a national network for medical interpreter education, using a standardized approach for the training of these healthcare interpreters. The university's Department of Communication is assisting the NFLC by providing expertise in intercultural communications.

A commitment to language research at Maryland is deeply rooted, with the university's linguistics department recognized as one of the top five in the

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nation. Also active in long-term research is the Neuroscience and Cognitive Science program, which joins faculty from linguistics, psychology, hearing and speech sciences, English, biology and computer science, to help bridge the gap between theoretical, computational, psychological and neuroscientific models of language. More recently added strengths include a Ph.D. being offered in Second Language Acquisition, and the expected collaborative dialogue involving language and culture in the new Center for Persian Studies.

In the next five years, Richard Brecht expects the University of Maryland to have the largest program in the nation devoted to language research, based on funding, number of researchers and facilities. “We are going to be—without question—the number one asset in working to solve the language problems of the nation,” he says. —*Tom Ventsias*

Impact is published four times a year by the Office of the Vice President for Research and is mailed to members of the mid-Atlantic research community and others who have an interest in the latest research at the University of Maryland.

Your comments and feedback are welcome; please email your comments to impact@umd.edu or fax them to Anne Geronimo, executive editor, at 301.314.9569.

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researchSPOTLIGHT



While plenty of K-12 students in the United States are taking Spanish or French classes, why aren't more students studying Mandarin Chinese, the most-spoken language on the planet? The federal government wants to significantly increase the number of K-12 students studying languages that are deemed critical—with Chinese, Russian, Persian and Arabic at the top of the list. Myriam Met, a senior research associate in the National Foreign Language Center, is in

discussions with the U.S. Department of Education on how the nation can expand its K-12 curricula in Chinese. Met also is developing e-learning materials to better train K-12 language teachers nationwide. For a closer look at the research and education components of the National Foreign Language Center, go to www.nflc.org; for more information about the Center for Advanced Study of Language, go to www.casl.umd.edu.



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