

Indiana University Department of Psychology Alumni Newsletter

# PSYCH ♦ NOTES

College of Arts & Sciences Alumni Association

Vol. 9/Spring 2005

## Imaging center adds dimension to department

*“It ought to be generally known that the source of our pleasure, merriment, laughter, and amusement, as of our grief, pain, anxiety, and tears, is none other than the brain. It is specially the organ which enables us to think, see, hear, and to distinguish the ugly and the beautiful, the bad and the good, pleasant and unpleasant . . .”*

— Attributed to Hippocrates, ca. 425

As psychologists, we are interested in behavior, be it human or other animal, typical or atypical, observable or internal. In cognitive neuroscience the relationships between brain function and behavior are explicitly studied, under the assumption that by better understanding how the brain works, we can also gain significant insights into behavior. However, the interest in research on brain function is not the realm of neuroscientists alone. The neural science program at IU, for example, consists of faculty from such fields as mathematics, biology, kinesiology, and, of course, many different sub-fields of psychology. There now exists a technique that allows researchers from many different disciplines to directly assess brain activity during a given task: functional magnetic resonance imaging (fMRI). Recognizing the broad interest in the study of brain function and given the importance of gaining knowledge about brain-behavior relationships, the psychology department at IU Bloomington will be acquiring an fMRI scanner this year.

### What is fMRI?

The advent of neuroimaging has allowed us to study the structure and function of the normal, living, human brain — a significant breakthrough in science in general, but especially significant for psychology. Structural magnetic resonance imaging uses magnetic fields to create images of biological tissue. By changing the magnetic gradients and oscillating electromagnetic

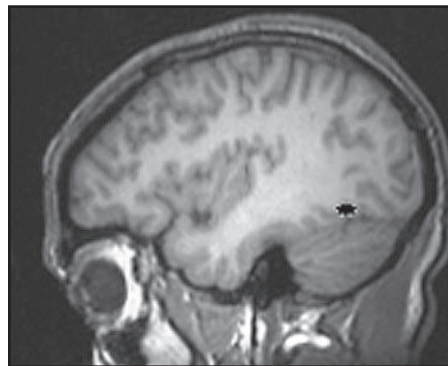
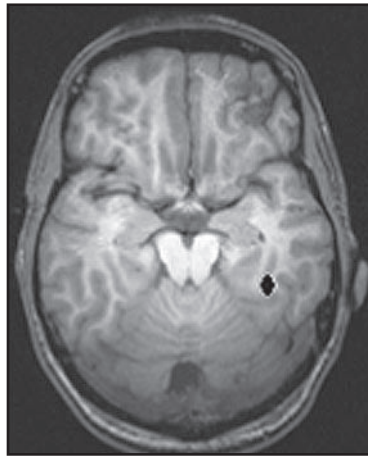


Image files resulting from fMRI activation are overlaid onto a single subject's structural MRI scan. Activation in three dimensions shows here in response to seeing letters.

fields, an MRI scanner creates high-contrast, high-resolution images of tissue. Energy from the electromagnetic fields are absorbed by atomic nuclei, and, in the case of MRI, the scanners are “tuned” to the frequency of the hydrogen atom. After the hydrogen atoms absorb the energy, it is emitted, and the amount of emitted energy depends on the concentration of hydrogen molecules. The scanner detects differences in hydrogen concentration, and the data from this process is transformed into crisp images of tissue. Properties of scans can be changed to detect tumors, blood vessel abnormalities, and ligament or bone damage. MRI is the only non-invasive neuroimaging technique that can detect axonal damage in the brain and is, therefore, used for early detection of multiple sclerosis. MRI allows us to see the anatomy of the living brain in very fine detail while avoiding the ionizing radiation used, for example, in X-ray images and CAT scans. Thus, it has been an invaluable tool used in medicine for early detection of tissue damage. So much so that the 2003 Nobel Prize in medicine went to two researchers whose discoveries involved MRI. Structural neuroimaging is like a snapshot of the brain's structure. Thus, we cannot detect short-term changes in the brain that result from *active brain functioning* with structural MRI. To measure how the brain functions, a movie of the brain is needed. Such techniques are called functional imaging and are necessary for observing changes in brain activity over time.

Functional imaging began with positron emission tomography (PET). But because PET requires the invasive injection of a radioactive substance, only gathers functional images at a slow pace, and results in brain images that are at a low spatial resolution, it is not used as frequently as it once was. The development of functional MRI/fMRI as a safe, non-invasive technique has resulted in an explosion of excitement and interest

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# Imaging center

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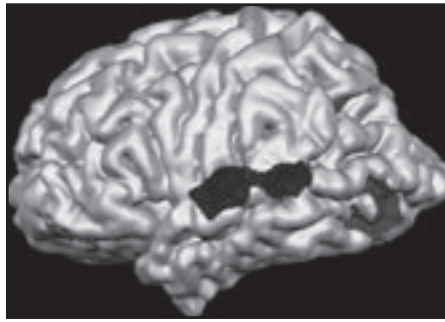
in functional neuroimaging. Simply stated, fMRI works by detecting the metabolic correlates of neuronal activity.

The changes in neural activity of the brain in humans and other animals are accompanied by changes in local blood flow. These changes in blood flow are in turn accompanied by changes in oxygen consumption. The amount of oxygen that is carried by hemoglobin changes the degree to which hemoglobin disturbs a magnetic field. Therefore, the fMRI signal is sensitive to the amount of oxygen in different brain regions. Not surprisingly, the fMRI signal is referred to as the blood oxygen-level dependent (BOLD) signal, and the tight coupling of neural activity and oxygen supply make the BOLD signal a reliable measure of the actual neural activity. BOLD signal strength is transformed into images that are usually overlaid onto structural MRI images of the brain. The resulting picture is a high-resolution anatomical image of a subject's brain with a colored overlay of neural activity during a given state.

## Why use fMRI?

fMRI is a non-invasive way to look at brain activity as it happens. It allows for excellent spatial localization of brain function. And it can be performed on virtually any subject group, allowing generalizations to be made to broad populations. Numerous images can be gathered from a single subject, allowing researchers to collect vast amounts of data, covering a wide range of experimental tasks from a given subject. Partially because of the number of observations that can be collected from a single subject, entire published studies are often composed of eight to 15 subjects in total. Case studies are not unusual. In fact, studying individual differences in brain activations is a common way of investigating how certain experiences affect brain function. When experiments are designed appropriately, significant insights into normal and abnormal brain functioning and the interactions between brain and behavior can be discovered.

**Brain mapping:** Localization of function is probably the most widely used application of fMRI. Although studies on brain-damaged individuals tell us much about areas of the brain devoted to different functions, the conclusions based on such analyses are sometimes difficult to apply to the intact brain. In addition, brain lesions are typically diffuse and localized brain damage coupled with an intact ability to perform on psychological tests is rare. fMRI has, in most cases, confirmed and ex-



*A researcher can take 3-D image files and transform them into a 3-D model of a subject's brain. The black activation shows areas that are active when a subject hears animal sounds. The grey activation shows an area active when pictures of animals are viewed.*

tended knowledge gained by lesion studies. For example, fMRI has provided evidence for localization of systems involved in such functions as visual recognition of objects, faces, and words; auditory word recognition; memory systems, including episodic, semantic, and working memory; affective systems responsible for emotion detection and emotional response; spatial localization; mathematical reasoning; motor response systems; and motion detection, to name a few. Unlike the early phrenologists, modern neuroimaging researchers recognize that many functions rely on distributed networks throughout the brain and that a single brain region may participate in more than one function. Practically speaking, brain mapping can be extremely useful when predicting behavioral outcomes of brain damage, whether acquired or developmental. Knowing the location of particular functions can help early diagnoses of location of brain damage, by assessing atypical behaviors. Indeed, some forms of brain damage are not detectable by our current imaging tools. In such cases, atypical behaviors can point toward location of damage, aiding in diagnoses and prognoses.

**Predicting behavior from brain activity:** Can we predict a subject's response to a stimulus based solely on brain activations? Several research programs have determined that some behavioral responses can be predicted by looking at brain activation patterns.

**Mind-brain relationships:** For example, area MT in the brain has been known to activate when a person views moving stimuli, hence the label "visual motion area." Motion aftereffects are illusions that occur when we think that we see motion that is not really there. Area MT shows significant activation when subjects "think" that they see motion. Thus, the brain region MT reacts not only to real motion, but also to "imaginary" motion.

**Atypical brain function:** fMRI allows us to investigate temporary atypical brain function as a result of administration of drugs, as well as more permanent dysfunctional activity resulting from brain damage. What happens to brain function after ingestion of alcohol? Coffee? Nicotine? How long does it take for the neural changes to go back to normal after drug ingestion?

**Cognitive aging:** The relationship between cognitive aging and neural aging can be systematically explored. fMRI can reveal which brain regions are activated during a certain cognitive task and track how this activity is affected by aging. This type of work can be especially useful in learning more about Alzheimer's disease and Parkinson's disease.

**Animal research:** fMRI provides a non-invasive method for non-human imaging also. Not only is this technique useful for anatomical imaging of experimental animals, but it also allows functional imaging of animals performing tasks.

The variety of research programs that can be aided by functional neuroimaging is virtually unlimited.

## IU's fMRI facility

The IU psychology department is acquiring a 3T (tesla) whole-body Siemens Trio scanner, due to arrive this summer. This particular scanner is on the cutting-edge of fMRI, having the second-highest magnetic



3T whole-body Siemens Trio scanner

field strength approved for clinical use with human subjects, which means a higher-quality functional signal than the traditional 1.5T magnets. There are about 45 Siemens Trio scanners in the United States, allowing us to cooperate with other imaging sites. Siemens is known for its excellent research and development and technical support. The scanner will be housed on the first floor of the psychology building, in the psychological clinic wing, and will be available for all departments to use, pending

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# Psychology shops keep researchers on cutting edge

During a lab meeting last year, Linda Smith and Hanako Yoshida, a research scientist in Smith's lab, were discussing how mothers help their children learn language. Most of the research on this issue puts mothers and children in a room together with some toys and points a camera at them, recording the interactions and the language. These recordings are then studied to see what "input" the language learner received. The camera, however, doesn't see what the child learning language sees; instead, it sees the child and parent from a sideways, third-person point of view. Yoshida and Smith wondered if the language-learning environment would look different if they could see it from the child's point of view, through the child's eyes. The idea seemed fantastic, but neither Smith nor Yoshida knew exactly how to create an apparatus that would allow for such perspective. So they enlisted the help of Bill Freeman, an electronics specialist in the psychology department's Technology Support Group.



Two-year-old Yo Anne, a research subject in Professor Linda Smith's lab, looks at a bunny while her mother holds it and talks about it.

Freeman is one of seven men responsible for inventing, designing, fabricating, testing, installing, or maintaining the electronic and mechanical instruments and equipment for research labs in psychology. Ours is one

of only a few psychology departments in the world with the capability to design and fabricate in-house sophisticated electronic and mechanical apparatus. TSG personnel are frequently consulted by other IU departments and other universities for advice in solving instrumentation problems. Smith and Yoshida had a pretty good idea what they wanted: a small camera that could be placed close to the eyes of a small  
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## Imaging center

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proposal review and approval.

Experimental design is a crucial component of functional imaging because time in the scanner is expensive and limited. New and existing faculty members in the psychology department have extensive experience in functional neuroimaging and are willing to help newcomers to the field set up and design experiments. In addition, a "mock scanner" will be constructed that will allow researchers to design and pilot studies while in an artificial scanner environment. The mock scanner will look and feel just like the real scanner, but without the magnetic field. We are conducting open biweekly meetings to discuss fMRI issues and techniques. Additional information sessions and demonstrations will be held once the scanner is in operation.

The psychology department at IU represents an extensive range of research topics. Following are some of the research areas that will be investigated using the new fMRI facility.

- Children with ADHD have been known to have atypical eye movements. How is this reflected in brain activity? How does the brain activity in these children compare to children without ADHD when performing visual tasks?
- Individuals with dyslexia read slowly and laboriously. How does letter processing

in the brain of these people compare with that in normal readers?

- What are the relationships between brain changes and behavior in the earliest stages of Huntington's disease? Can functional neuroimaging be used to help evaluate the effectiveness of cutting-edge treatment for this degenerative disease?
- It is known that autistic children have atypical social skills. How does the processing of social information, such as emotional expressions, differ in the autistic brain? What systems interact during social processing in these children?
- What is happening in the brain of an

**For more information, see these Web sites:**

[www.medical.siemens.com/](http://www.medical.siemens.com/)  
[www.humanbrainmapping.org/](http://www.humanbrainmapping.org/)

expert? What are the brain changes associated with becoming an expert at visual recognition of certain classes of stimuli (novel alphabets, random shapes)?

- In collaboration with the School of Optometry, there can be some fascinating studies on the unusual visual abilities of athletes entering the IU athletics program.
- It is as yet unknown how the processes involved in hearing one's own voice and controlling one's speech interact in the brain. Investigating the integration of hearing speech and producing speech can be done.

- Several research programs plan investigations of memory, learning, and decision making in the brain.
- To better understand the biological and cognitive disturbances associated with schizophrenia and bipolar disorder, one research group will be investigating the sensory processing (visual and auditory) of individuals with these disorders.
- How does drug addiction affect decision making? Are the behavioral differences in decision making between addicted and non-addicted people reflected in differences in brain functioning?
- What are the neural bases of problem solving? Are there individual differences in this skill?
- Various researchers are interested in interactions between vision and touch; vision and motor systems, such as those involved in speech, hand movements, and gestures; and hearing and vision.

The advent of functional neuroimaging has provided a fresh perspective on the relationships between behavior and the brain. Many research-intensive colleges in North America have MRI scanners that are used for research in functional imaging. IU has committed to joining this prestigious group. We know that with our excellent and diverse research faculty, the fMRI facility at IU will be used to investigate fascinating questions in basic and applied research, resulting in significant scientific discoveries.

— Karin James

# Psychology shops

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child. At first their intention was to create a device that could be used in a daycare setting, with the camera hidden from the view of other children. Collaborating with Chen Yu, a new assistant professor in the department, they found a tiny camera that could be connected to a small transmitter. The transmitter needed to be small enough to be housed in the back pocket of a pair of overalls that the child would wear. It took many trials and errors to get a device that 1- and 2-year-old children would keep on. They tried putting the camera in a hat, but it moved too much; they tried various head-dresses; they tried telling the children that they were not to touch the head-dress. None of it worked.

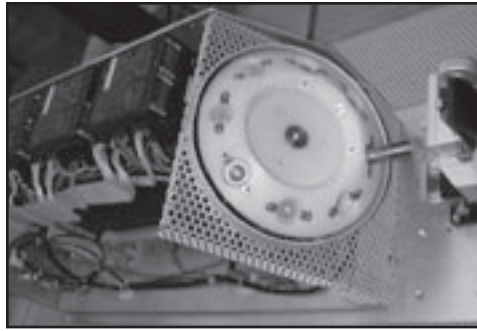
Finally, Doug Brewster, an instrument shop assistant in TSG, solved the problem. He fashioned a rubber strap with a Velcro fastener to hold the camera in place. This, and an even smaller camera with a wide-angle lens, is now working well. The rubber strap is so soft and fits so tightly and the camera is so small, the children seem not to notice it once it is on.

And what does the language-learning environment look like from a child's point of view? Yoshida and Smith note that there is a lot more — and different — information there than one would have thought from the third-person view. Children spend a lot of time looking at the parent's hands as clues to what is being talked about and what is going to happen next. Yoshida plans to use the device to collect pilot data to prove that this child-view of language learning merits further investment and research.

Smith remarked that an in-house shop is one important reason that IU psychology maintains its edge in path-breaking and innovative research. "New ideas," she says, "often require whole new methods and equipment — not stuff you can buy off the shelf. We are very lucky we have such an expert team that can invent new equipment, enabling new discoveries."

James Craig agrees. In the course of his studies of tactile pattern perception, Craig needed to be able to present well-controlled mechanical stimuli to subjects' fingerpads. The stimuli needed to be specified in terms of the force and the velocity with which they contacted the skin and depth to which the skin penetrated the grooves in the contactors. Moreover, these variables had to be specified dynamically and with millisecond and micron accuracy. As no one had ever attempted to make such measurements, no such device existed.

Craig brought his problem to Dwight



Hector, instrument designer, and Mike Bailey, senior electronics engineer, in TSG. Hector developed, from scratch, a miniature transducer to register the skin penetrating the grooves of the contactor as it touched the skin. Hector, along with research machinist Doug Brewster, designed and built the mechanical parts in-house. Bailey, along with Jeff Sturgeon, designed and built the microprocessor controls, wiring, and software necessary to make the stimulator work to control the stimulus and measure the skin's response. The resulting device consists of a rotary stepping motor and controller to select one of eight contactors from the storage turret, a compound linear and rotary stepping motor, with two additional controllers used to present the selected contactor to the subject's skin. A computer runs a program that communicates with an electronic interface to control the operation of the three motors. The depth and force sensors send their analog signals back to an A/D board inside the computer.

Bailey then developed the software to control the stimuli and measure the skin's response. With this device, Greg Gibson, a graduate student in Craig's lab, plans to selectively stimulate different types of receptors in the skin and specify precisely what the nature of the stimulus is that activates them. "There is no way that I can see how we could have developed this device with a commercial firm," says Craig. "The plans for this device developed as we went along. We had to make modifications that simply could not have been done with a commercial firm. They would want firm and fixed specifications. And the cost would have been prohibitive. The people in the shop are terrific."

The in-house shop and the willingness of its personnel to experiment is one of the things that led Thomas James to the department last fall. James, whose research will utilize the up-and-coming fMRI, is working with the shop to develop a mock fMRI machine that not only recreates the space, but also the sounds, movement, and non-scanning activities involved in this type of imaging. Having worked at universities both with and without an in-house shop, James has seen the benefits firsthand. "Hav-

*This fingerpad device, used by Professor James Craig's lab to study tactile pattern perception, is able to selectively stimulate different types of receptors in the skin and specify precisely what the nature of the stimulus is that activates them with millisecond and micron accuracy.*

ing the shop available for not only the development, but also the troubleshooting of research equipment is a definite asset," he says. "With our mock fMRI — because they are creating it to be exactly what we want it to be — we will be able to not only place people into something that looks like the real thing, we'll also be able to walk through our experiments, train our subjects to avoid head movement, and minimize errors and problems during actual scans — thereby saving valuable time and resources, including money — with the actual fMRI."

The shops consist of 3,144 square feet, with dedicated space for an electronics shop, an instrument shop (with wood, machine, and sheet metal shops), and storage. The instrument shop includes 36 major machines and myriad hand tools and provides the capacity for fabrication of items in any kind of metal, plastics, and wood. State-of-the-art AutoCad® and SolidWorks® computer-assisted design and layout software allows for efficient engineering of complex mechanical devices. The electronics shop has the capability to design and build virtually any electronic device required by the department, as well as design multilayer circuit boards and microcontrollers. In addition to the ordinary instruments, like oscilloscopes, meters, signal analyzers, and frequency counters, the addition of CadInt® circuit board design and layout software and a surface-mount soldering station has greatly expanded the design and fabrication capabilities of the shop. In addition to sophisticated design and fabrication of electronic instruments, the electronics shop repairs and maintains electronic instruments, computers, printers, video, audio, and other specialized electronic equipment.

It is significant and important that most of the instruments designed and built in the shops are a collaborative effort between the electronics shop and instrument shop. Many, if not most, instruments involve both machine components and electronic components. In addition, the electronics personnel have expertise in many mechanical areas and the instrument shop personnel have expertise in many electronic areas. This crossover and collaborative ability makes possible the solution of many instrument problems that would not be possible otherwise.

— Dwight Hector and Heather Winne



# Meet the shop personnel

## Instrument shop

**Dwight Hector**, PhD, has been the departmental instrument designer for seven years. For 15 years, he operated his own instrument design and fabrication company, serving universities and companies in the United States and Europe. He has provided thousands of custom electronic, mechanical, and electromechanical instruments for other researchers. As a former faculty member and researcher in physiology, anatomy, and medical sciences, he is able to understand the needs of researchers and create devices that satisfy those needs. He believes that he has a larger impact in the scientific world by facilitating the work of many researchers than by doing research himself. For an instrument designer, it is key to be able to bring to bear on any given problem insight from many scientific disciplines, as well as mechanical and electronic engineering and material science. Many times the solutions are derived from insight into first principles of physics, chemistry, and materials. For example, the sensor for the Controlled Dynamic Tactile Stimulator for Professor James Craig was one such device. It had to detect five microns of penetration of skin into a patterned surface (a red blood cell is eight microns in diameter).



**Doug Brewster** is a research machinist who has been with the department for three years. A trained and skilled machinist and certified welder, he is currently completing a degree in design technology. His recent training in AutoCad® and SolidWorks® has expanded the instrument shop's ability to render three-dimensional designs in the solid modeling environment. His insight into novel approaches to machining, problem solving, and fabrication techniques has been a valuable addition to the instrument shop. In his professional experience, he has fabricated devices from many kinds of metal, plastics, and wood. There are few people who have this level of skill in both wood and metal.



## Electronics shop

**Mike Bailey**, senior electronics engineer, has been with the department for 26 years. With an AAS and a BS in electrical engineering technology, he was a research assistant at Kitt Peak National Observatory and served in several capacities, including telescope operation, photomultiplier calibration, and computer maintenance and design engineering. Of the hundreds of projects that Bailey has accomplished for the psychology department, the most challenging was the control systems for the Controlled Dynamic Tactile Stimulator for James Craig. Now he is designing an optical fiber method for sensing response



box signals in the new fMRI unit, coming later this year. Expansion of his knowledge of multilayer circuit board design has substantially improved the quality of stimulus control and data collection for many psychology researchers.

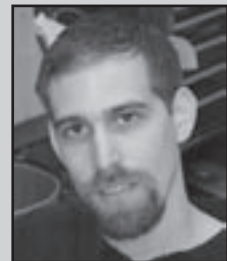
**Jeff Sturgeon** is an electronics specialist with an AAS degree in electronics from Ivy Tech and almost 20 years of experience in electronic design, repair, and fabrication. He is currently expanding our capabilities with programmable microcontrollers and believes that a large part of our future work will center on them. The most interesting projects for Sturgeon are those that require the input from everyone to refine the design ideas — as with Professor William Timberlake's automated behavior enclosures.



**Bill Freeman** is an electronics specialist with training from the Army in microwave long-distance communication. He has been with IU for 20 years. He is a resource person for computer hardware, as well as video and audio equipment. Whether it is ordinary video or computer links, or a specialized helmet cam for experiments with children, he understands the video equipment necessary for the job.



**Doug Toms** has been with the psychology department for five years as an electronics specialist, following electronics training with the Navy and at Ivy Tech. He has worked in quality control in the cable industry. Beyond his formal training, he is expert in computer technology and has learned surface-mount circuit board technology, which is an integral part of our newest abilities in circuit board design and fabrication.



## Model maker emeritus

No description of the psychology shops would be complete without noting the contributions of **John Waltke**, model maker emeritus. Dozens of faculty and hundreds of students undoubtedly remember Waltke's help in designing and constructing laboratory devices. He set up the original psychology shop in 1961 when the building was built and served the department for 30 years until retirement in 1991. He has been a real resource for machine techniques and fabrication methods to all who have come after him. At the age of 81, he still spends time in the shop each day and, when not busy on a project, enlightens us with stories from Army anti-aircraft artillery and landing at Luzon on D-Day+2 to building TV broadcast equipment at Sarkes Tarzian through 30 years of instrument work.



## New year brings changing of guard, new faces, new major

It is with some mixed emotions that I write this column for this issue of *PsychNotes*. On July 1, I am stepping down as chair of psychology to assume the position of executive associate dean of the College of Arts and Sciences. I have had the honor and privilege of serving as chair of this outstanding department for the last 10 years and am looking forward to new administrative challenges in the College. I am pleased to tell you that I am leaving the department in very good hands. **Linda Smith** has agreed to serve as the next chair of psychology, and I am confident that her energy and vision will lead our department to even greater heights.

I have much news to relate to you since the last issue of *PsychNotes*. First, on a very sad note, the department lost one of our most noted scientists in December with the passing of **Esther Thelen**. Her achievements over the years in the fields of developmental psychology and movement were monumental. She will indeed be missed. The department has established the Esther Thelen Fund in her memory. This fund will be used to promote and continue the dialogue on the dynamic view of child development that was so dear to Esther, especially activities that promote dialogue

among scientists, practitioners, educators, care givers, and policy makers.

We have added many new faces to our faculty, which now includes 46 members. Joining us are three senior hires: **Michael Walker**, from Brown (neuroscience); **Stanley Wasserman**, from the University of Illinois (statistics and quantitative methods); and **Julia Heiman**, from the University of Washington (clinical science and director of the Kinsey Institute). We also successfully recruited three junior hires: **Thomas James** (cognitive neuroscience), **Sharlene Newman** (cognitive neuroscience), and **Chen Yu** (computational and developmental psychology). I also note the retirement of **Richard McFall**, who for many years served as the department's director of clinical training. Dick is nationally recognized for his model of training clinical scientists, and our clinical program most certainly reflects his leadership.

In other developments, construction of our Human Brain Imaging Facility is finally under way, and we expect that it will open in August of this year. **Julie Stout** has been chosen to direct this facility, and **Sharlene Newman** and **Tom James** are the first brain-imaging scientists we have hired to use the 3T fMRI scanner that will be installed there. Final architectural drawings are also being prepared for the construction of the second multidisciplinary science building, which will be located immediately north of the Psychology Building on Walnut Grove Avenue. Some of our neuroscience faculty will move into this building

when it is completed. The department has recently received approval to offer an undergraduate certificate in neuroscience, and we are working on a plan to offer a BS in neuroscience in the near future. The IU administration has committed several million dollars to the further development of neuroscience on the Bloomington campus, and, as you can see, the department has already benefited from this investment.

Given the department's growing interest in the brain sciences, including computational and cognitive sciences, in addition to neuroscience, we have voted to officially change our name to the "Department of Psychological and Brain Sciences." The faculty believes that this name captures new developments in the department while reflecting our great traditional strengths in social psychology, clinical science, cognitive psychology, mathematical psychology, developmental psychology, and animal learning and behavior. We anticipate that administrative approval for this name change will come sometime in the fall.

Finally, I would like to take this opportunity to thank our alumni for their great generosity over the years. Your financial contributions have had a significant impact on the continued development of the department. While serving as departmental chair for the last 10 years, I have had many wonderful and rewarding interactions with the department's former students. I thank you for these memorable experiences.

— Joseph E. Steinmetz  
Eleanor Cox Riggs Professor

### PSYCH ♦ NOTES

This newsletter is published by the Indiana University Alumni Association, in cooperation with the Department of Psychology and the College of Arts & Sciences Alumni Association, to encourage alumni interest in and support for Indiana University. For activities and membership information, call (800) 824-3044 or send e-mail to [iualumni@indiana.edu](mailto:iualumni@indiana.edu).

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### We Want YOU!



As many of you may remember, the Department of Psychology at IU is large, with hundreds of undergraduate majors passing through our doors on a regular basis. In an attempt to create a greater sense of community and belonging within our students, we are undertaking several projects, including connecting current students with our alumni.

Would you be interested in helping us with this mission? You can by giving us your story to use in future newsletters or on our Web site. Also, we would love "words of wisdom" for students about your field and life after graduation. If you have ideas about other programs or events, send them along as well.

Contact Heather Winne at (812) 855-8897 or [hwinne@indiana.edu](mailto:hwinne@indiana.edu). We'd love to hear from *you!*



## Around the Department

### Faculty

**Jerome Busemeyer** has become the new editor of the *Journal of Mathematical Psychology*.

**Brian O'Donnell** was tenured and promoted to the rank of associate professor.

**David Pisoni's** NIH multidisciplinary training grant in speech, hearing, and sensory communication was renewed for another five-year period beginning July 1, 2004.

**Dale Sengelaub** was given the Center for the Integrative Study of Animal Behavior Exemplar Award for 2004.

**Eliot Smith** received the 2004 Thomas M. Ostrom Award for distinguished contributions to the area of social cognition within social psychology.

**Olaf Sporns** was tenured and promoted to the rank of associate professor.

**Zakary Tormala** was named a finalist for the Society of Experimental Social Psychol-

ogy Dissertation Award in 2004.

**Richard Viken** was named as the new director of clinical training for the IU Clinical Science Program.

**Bob Weiskopf** was chosen for the 2004 Student Choice Award by the IU Student Alumni Association. The award recognizes five IU professors annually for their excellent teaching and outstanding rapport with students.

### Staff

**Cindy Moore** was elected president of the Bloomington Advisors' Council for July 2004 to June 2006.

### Students

**Joe Johnson** and **Brian Mustanski** were the 2004 winners of the J.R. Kantor Graduate Award.

**John Petrocelli** received an American Psychological Foundation/Council of Graduate Departments of Psychology Graduate Research Scholarship in 2004.

**Catherine Sandhofer** was the 2004 recipient of the Irving J. Saltzman Award for Outstanding Graduate Achievement.

**David Wood** received an F31 NRSA grant through NIDA.

These undergraduate students were awarded the Howard Hughes Medical Institute Capstone Independent Research Opportunity for 2004:

**Blair Dana**  
**Emma Fortenberry**  
**Paul Jansen**  
**Irene Kim**  
**Christine Little**  
**Ari Nowacek**  
**Mark Osborne**  
**Kelly Walsh**

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## In memoriam: Department mourns loss of Esther Thelen

**O**n Dec. 29, 2004, **Esther Thelen**, a developmental psychologist who worked at IU for nearly 20 years, died of cancer. Thelen began her career as an assistant professor at the University of Missouri in 1977, coming to IU as a professor in 1985. During her 27-year career, she rose to the pinnacle of her profession. Thelen was president of the Society for Research in Child Development and served as president of the International Society for Infant Studies from 1996 to 1998. She was a fellow of the American Association for the Advancement of Science and the American Psychological Society. She received numerous grants from the National Science Foundation and had held continuous funding from the National Institutes of Mental Health since 1987.

Thelen is best known for applying dynamic systems theory — popularized under the name “chaos theory” — to the study of child development. Her work is largely responsible for changing the dominant view of how babies learn to reach for toys, walk, and accomplish some of the earliest mental tasks, such as remembering where things are. Before Thelen's seminal efforts, most researchers believed that infants reached and walked when the parts of the brain responsible for these activities “matured.” Esther showed, however, that these accomplishments reflect a complex



interplay of factors that includes babies' changing bodies and their external environments, as well as their growing brains and nervous systems. These factors interact in a step-by-step way in development as each infant carves

out his or her own unique pathway. Thus, development is more like improvisational jazz with infant as musician and less like a biological process driven by genes.

Important too, as with jazz, the music infants create as they learn to move and explore must be considered as a whole pattern rather than a sequence of individual notes.

“Dynamic systems theories depart from conventional approaches because they seek to understand the overall behavior of a system not by dissecting it into parts, but by asking how and under what circumstances the parts cooperate to produce a whole pattern,” Thelen told the *IU Research and Creative Activity Journal* in spring 2003.

Her theoretical breakthroughs have influenced scholars in psychology, kinesiology, cognitive science, computer science, robotics, and neuroscience. Her work has also had a major impact on the practice of pediatric physical therapy, which now

tailors therapies to individual children's bodies, rather than using standard exercises for all children of a certain age. More generally, Thelen championed a new view of development that has shaped how parents, practitioners, and policymakers think about children.

Esther Thelen was deeply loved, and she will be sorely missed by both her immediate and her intellectual family. She truly was the intellectual mother (and grandmother) to many students, postdocs, and collaborators, making sure her children were nourished, cared for, and appropriately challenged. She loved to travel, she loved opera, and she loved to share the company of friends and colleagues over fine food and wine. Her love for life and her love of those close to her was without bounds.

Thelen is survived by her husband, David, her daughter, Jennifer, her son, Jeremy, her sister, Harriet Saeck, and her grandson, Jackson. A memorial service was held on Jan. 16 in the Neal-Marshall Center, and a fund, designed to advance her vision of improved collaboration among scientists, practitioners, parents, and policymakers, has been established in her memory. For more information on Esther Thelen's work and the fund established in her name, please visit [www.indiana.edu/~psych/faculty/thelen.html](http://www.indiana.edu/~psych/faculty/thelen.html).

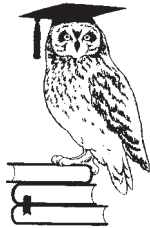
— John P. Spencer

# Department

(continued from page 7)

These undergraduate students were elected to Phi Beta Kappa in spring 2004:

**James Ray Burroughs**  
**Megan Christina Collins**  
**Stephanie Ann Dunning**  
**Elizabeth Carole Fyffe**  
**Sarah Luann Hampel**  
**Jennifer Lynn Hettenbach**  
**Shana Elise Hitze**  
**Jae Sung Kim**  
**Ralitza Kostadinova**  
**Jessica F. Levine**  
**Ari Scott Nowacek**  
**Shannon Leneigh Porter**  
**Andrew Carl Shawber**  
**Ranjita Dilip Shinde**  
**Meredith Lee Snook**  
**Jennifer Margaret Stephan**  
**Lindsey Rose Wagner**  
**Bethany Lynn Winnie**  
**Dena Marie Zavakos**



## PhDs awarded

**Amy Criss** — “The Representation of Single Items and Associations in Episodic Memory”

**Amy Johnson** — “Induction-Deduction Inference Asymmetry and Linguistic Abstraction”

**Joe Johnson** — “Preference, Process, and Parsimony: A Computational Modeling Account of Robust Preference Reversal Phenomena”

**Alicia Justus** — “Emotional Modulation in Psychopathic Individuals: An Examination of the Role of Gender and Personality in a Non-Incarcerated Population”

**Amy Marshall** — “Violent Husbands’ Recognition of Emotional Expressions Among the Faces of Strangers and Their Wives.”

**Amanda Mortimer** — “Trace Classical Conditioning in a Non-Clinical Obsessive-Compulsive Population”

**Brian Mustanski** — “The Relationship Between Mood and Sexual Interest, Behavior, and Risk-Taking”

**Nathan Steele** — “Social Utility: Zero-Sum and Non-Zero-Sum Games and the Effects of Competing Norms”

**Hanako Yoshida** — “Iconicity in Language Learning: The Role of Mimetics in Word Learning Tasks”

## New faculty

This past fall, the department welcomed six new faculty members to the department.

**Julia Heiman** joins Indiana University as a professor of psychology, professor of clinical psychiatry, and director of the Kinsey Institute. She earned a BA in psychology from Arizona State University in 1970 and a PhD in clinical psychology in 1975 from the State University of New York at Stony Brook. After completing a predoctoral clinical internship at Stony Brook, she was a postdoctoral research associate and research scientist at the Long Island Research Institute of SUNY-Stony Brook until 1981. From 1981 until last summer, Heiman was on the faculty of the Department of Psychiatry and Behavioral Science at the University of Washington in Seattle, where she also served as the research coordinator at Harborview Community Mental Health Center, as director of the Interpersonal Psychotherapy Clinic, and as director of the Reproductive and Sexual Medicine Clinic. Heiman’s research interests are in the field of sex research, with particular emphases on basic human sexual arousal processes from a psychophysiological perspective, clinical outcome research, including pharmacological interventions, and adults with coercive childhood sexual experiences. She is married to Johan Verhulst, a Flemish psychiatrist who is a faculty member at the University of Washington School of Medicine. She has an aging diabetic cat and is, at this point, a specialist in cat geriatrics. She is interested in environmental projects and most things green.

**Thomas James** joins Indiana University as an assistant professor of psychology. He received a BS in psychology in 1992, an MS in neuroscience in 1996, and a PhD in neuroscience in 2001 — all from the University of Western Ontario. From 2001 until last summer, James was a postdoctoral fellow in the Department of Psychology at Vanderbilt University. His research focuses on interactions between cognition and perception. He has used functional magnetic resonance imaging to study how previous experience with visual and tactile stimuli affects subsequent brain activation with those same stimuli. Also, he has investigated the



influence of conceptual information on visual perception. James is part of the new brain imaging research group that is being assembled on the Bloomington campus and will also participate in the programs in human biology, neural science, and cognitive science. James enjoys landscaping and spending time with his wife, Karin, and their two children, Jack and Emma.

**Sharlene Newman** joins Indiana University as an assistant professor of psychology. She received a BE in electrical engineering and mathematics from Vanderbilt University in 1993. She did her graduate work at the University of Alabama at Birmingham, receiving an MS in biomedical engineering in 1996 and a PhD in biomedical engineering in 1999. After completing her graduate work, Newman spent five years as a postdoctoral associate at the Center for Brain Imaging in the Department of Psychology at Carnegie Mellon University in Pittsburgh. Her general research interests are in how cortical networks in the brain work together seamlessly to perform complex cognitive functions. Specifically, she uses functional magnetic resonance imaging methods to examine how cerebral cortical regions collaborate to produce complex functions such as problem solving, language, and multitasking. Newman will participate as a member of the new brain imaging research group that is forming on the Bloomington campus. She will also participate in the human biology, neural science, and cognitive science programs. Newman and her daughter, Morgan, are excited about their move and the chance to explore all that the Bloomington community has to offer.



**J. Michael Walker** joins Indiana University as a professor of psychology and as holder of the Linda and Jack Gill Chair in Biomolecular Science. Walker earned a BA in psychology from Indiana University (1973) and an MA (1977) and PhD (1979) in psychology from Ohio State University. After spending four years as a postdoctoral fellow at the University of Michigan, Walker joined the faculty at Brown University, where he was a professor of psychology and neuroscience and chair of the Department of Psychology until coming to Bloomington last sum-



(continued on page 9)

# Alumni Notebook

## Before 1960

**Dorothy H. (Jones) Brenner**, BA'53, of Maryland Heights, Mo., volunteers as a mentor for Parkway School District's Oasis program and as a docent for Shaw Nature Reserve. She can be reached at [bdottie6@aol.com](mailto:bdottie6@aol.com).

## 1960s

**Dick E. Hammond**, BA'60, MAT'66, MS'66, is professor emeritus of education at Texas State University, formerly known as Southwest Texas State. He retired in 2002, lives in San Marcos, Texas, and can be reached at [dh20@txstate.edu](mailto:dh20@txstate.edu).

## Department

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mer. His research interests are in the fields of behavioral and cellular neuroscience. Specifically, he uses advanced technological procedures to study the pharmacology of the brain's endogenous cannabinoid system, with special emphasis on the role of this neurochemical system in pain perception and motor control. When Walker isn't busy with work or his family, he enjoys photography and other visual arts and listening to jazz.

**Stanley Wasserman** is the Rudy Professor of Sociology and Psychology. He has held faculty positions in statistics, psychology, and sociology at Carnegie Mellon, the University of Minnesota,



and the University of Illinois, and visiting appointments at Columbia and the University of Melbourne. Educated at the University of Pennsylvania and Harvard University in the 1970s, he is a fellow of the Royal Statistical Society and an honorary fellow of the American Statistical Association and the American Association for the Advancement of Science. Known for his work on statistical models for social networks and for his text *Social Network Analysis: Methods and Applications* (co-authored with Katherine Faust), Wasserman teaches courses on applied statistics and sociological and psychological methods. He is also chief scientist for the Visible Path Corp., New York City, a software firm developing social network analysis for cor-

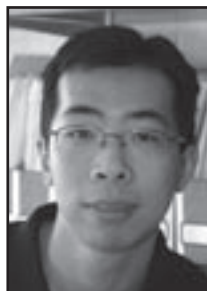
**Judith L. Cutright**, BA'67, is president and owner of Cutright Communications. She produces, writes, and directs productions for corporations and not-for-profits. She lives in Corpus Christi, Texas, and can be reached at [cutrightc@aol.com](mailto:cutrightc@aol.com).

**William R. Mead**, PhD'67, was named to the NISH board of directors in June 2004. NISH is one of two national not-for-profit organizations designated to facilitate the Javits-Wagner-O'Day Program, which provides employment opportunities for nearly 40,000 people who are blind or have other severe disabilities. Mead is founder and CEO of Job Options and is a member of the California State Independent Living Council. He lives in La Quinta, Calif.

porate settings. His wife, Sarah, is the new associate director of research administration at the IU School of Medicine. They have two grown sons in Chicago and currently live with two Airedale terriers, spending time in both their downtown Indianapolis and Bloomington-area homes. Wasserman plays golf when he has time and is trying to maintain his jazz radio show on WEFT in Champaign, Ill., but hopes to find a spot on WFHB in Bloomington eventually.

**Chen Yu** joins Indiana University as an assistant professor of psychology. He received a BE in controls and robotics in 1996 and an MS in controls and robotics from the Beijing University of Technology in 1998. In 2001, he received an MS in computer science from the University of Rochester and recently completed his PhD, also at Rochester.

Yu's research interests lie in understanding the development of language, perception, and cognition in humans and in applying the lessons from human development and learning to build artificial intelligence systems. He is particularly interested in the problem of language acquisition, as well as other relevant problems, such as perceptual learning and category development, using integrative computational and experimental methods. Yu will also be an active part of the Cognitive Science Program. He enjoys a variety of sports, especially soccer, which he participates in regularly, weather permitting. He and his wife recently had their first child, a son named Andrew.



**James A. Brewer**, BA'69, is the owner of Brewer and Associates, a financial consulting practice. He hosts a weekly radio program called *Christian Health and Wealth* on WRFD, is a national speaker and author and serves on the national executive board of CBN-USA Christian Business Network. The Columbus, Ohio, resident can be reached at [jspring@mindspring.com](mailto:jspring@mindspring.com).

## 1970s

**Rolf F. Rehe**, BA'70, MA'72, a former professor of typography at IUPUI's Herron School of Art, is the director of Design Research International. He lives in Vienna, Austria.

**Henrietta G. (Hubbard) Connor**, BA'71, BSN'87, writes, "I'm still working as a nurse case manager in Louisville, Ky."

**Pat Davis**, BA'75, is an associate in the litigation section of Jackson Walker. She lives in Dallas.

Frank J. Deveau, BA'76, JD'80, is a partner/director with Sommer & Barnard Attorneys in Indianapolis.

## 1980s

**William H. Mott Jr.**, BA'82, received a JD from the University of Toledo College of Law in August 2004. He is a professor of life/physical sciences at the University of Phoenix's Troy, Mich., campus. The Toledo, Ohio, resident can be reached at [wmottjr.m.s.jd@alumni.indiana.edu](mailto:wmottjr.m.s.jd@alumni.indiana.edu).

**Drew W. Prusiecki**, BA'82, JD'85, is chair-elect of the Northeast Florida Chapter of the American Red Cross. He lives in Jacksonville, Fla.

**Yousef M. Sharaiha**, BA'83, is a consultant/oncological surgeon in Amman, Jordan. His appointment to this position follows 13 years of training in the United Kingdom, and his area of interest is breast disease and cancer. He can be reached at [ysharaiha@khcc.jo](mailto:ysharaiha@khcc.jo).

**Robert P. Sharkey**, BA'83, writes, "I'm in the growing field of predictive maintenance, using state-of-the-art instruments to predict when machines will fail. My wife, son, and I live in Indianapolis." E-mail: [robert.sharkey@conagrafoods.com](mailto:robert.sharkey@conagrafoods.com).

Maj. **Jeffrey S. Yarvis**, BA'88, is the chief of mental health for the 30th Medical Brigade, stationed in Heidelberg, Germany. He completed a PhD in social work at the University of Georgia in May 2004. His dissertation compared depression and alcohol problems among Canadian peacekeepers who had different levels of traumatic

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# Alumni notebook

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stress. He can be reached at Jeffrey.Yarvis@us.army.mil.

John D. Papageorge, BA'89, a partner/director with Sommer Barnard Attorneys, Indianapolis, has been elected to serve as chair for the Indiana State Bar Association's litigation section for 2004-5.

**Lauren C. (Reynolds) Rea**, BA'89, writes, "I got my doctorate in physical therapy a few years after leaving IU, and I currently work for a large hospital system in Milwaukee. I often use video technology to analyze my patients' gait patterns or to evaluate performance in sports for injury prevention." She can be reached at laurenrea@hotmail.com.

Since July 2004, Susan E. Thomas, BA'89, MLS'91, has been head of collection development at the Schurz Library at IU South Bend. Previously, she worked for more than nine years at Valdosta State University in Georgia. She and her husband have one daughter, born in 2003.

## 1990s

**Cheri DeBerry Mitchell**, BA'90, CBSt'90, is pursuing a master of arts degree in pastoral care and counseling at Christian Theological Seminary. She lives in Brownsburg, Ind., and can be reached at chefcheri@sbcglobal.net.

**Maurice A. Cogdell Jr.**, BA'92, started Cogco/Marketing, a medical-services brokerage company, and recently accepted a medical sales position with Stericycle, which offers OSHA- and HIPPA-compliance services. The Lisle, Ill., resident can be reached at usermaclvr@aol.com.

**Le Shundra "DeDee" Nathan**, BA'92, MS'00, finished fifth in the heptathlon at the U.S. Olympic Trials in July 2004 and retired from the sport. At the Sydney, Australia, Olympics in 2000, she placed ninth in the heptathlon. She teaches at Warren Central High School in Indianapolis.

**Jennifer McDaniel Bauer**, BS'93, MIS'98, is a senior Web technologist for Activant Solutions. She lives in Austin, Texas, and can be reached at jenni@io.com.

**Holly N. Haskell**, BA'93, completed an MSN in 1996 and works as a regional sales manager for the chronic infusion division of Caremark Rx. She lives in St. Louis and can be reached at hhaskell@prodigy.net.

**Chris Stallings**, BS'93, writes, "After teaching high school in northern Virginia for years, I'm now teaching in California and loving the culture and weather." He lives in Monterey and can be reached at cstallings@tidalwave.net.

**Alexandra S. (Lipps) Sylvia**, BA'93,



## Voting matters!



It's time for the IU alumni trustee election.

Ballots and information about the candidates will be mailed to all IU graduates in May and must be returned by the end of June. Look for your ballot to arrive any day.

Meanwhile, you can also find information about the candidates in the May/June *Indiana Alumni Magazine* or at

[www.alumni.indiana.edu/magazine/](http://www.alumni.indiana.edu/magazine/)

JD'96, is a partner at the Indianapolis-based law firm of Plews Shadley Racher & Braun. Her husband, Michael Sylvia, BS'89, opened his second restaurant, Elements, on Massachusetts Avenue in Indianapolis. *Indianapolis Monthly* named Elements the 2004 Restaurant of the Year.

Jennifer L. Ashcraft-Ault, BS'94, has worked as an officer for customer service and banking center operations for Jackson County Bank since 1999. She lives in Seymour, Ind.

Kevin M. Kieffer, BS'94, is a tenured assistant professor of psychology, student adviser, and psychology internship coordinator at Saint Leo University. Located just north of Tampa, Fla., Saint Leo is one of the largest Catholic universities in the nation. Kieffer lives in Lutz, Fla., and is a licensed psychologist in that state.

Kristen E. Kirkham, BA'95, MBA'02, has been appointed a Six-Sigma Black Belt for sales and marketing at Eli Lilly in Indianapolis.

**Amy M. (Hess) Tempel**, BS'95, is a family case manager for the Dubois County Division of Family and Children in Jasper, Ind. She can be reached at amytempel@hotmail.com.

Scott L. Baylin, BS'96, is in dental practice with Leikin and Baylin Dental Care, Catonsville, Md. His first child, Branden, was born in August 2004. E-mail: sbaylin@catonsvilledentalcare.com.

**Matthew E. Johnson**, BA'96, received an LLM in taxation from Capital University Law School in January 2004. He practices in estate planning, estate and trust administration, real estate, and business practice areas for the law firm of Stebelton Aranda & Snider. He lives in Lancaster, Ohio.

Dewey E. McLin III, BS'96, is the medical science liaison for CNS Los Angeles, a division of Forest Laboratories Inc. He and his wife, Jessica Pilar, live in Garden Grove, Calif., where he can be reached at

deweymclin@yahoo.com.

Elizabeth Galvin Walker, BA'96, MHA'99, JD'99, is vice president of planning and physician operations for Henry County Memorial Hospital in New Castle, Ind. She has a new son named Alexander James Walker.

**Amy L. Johnson**, BS'97, is the coordinator of quality improvement at Jewish Family and Children's Service in Waltham, Mass. The Brighton, Mass., resident earned a master's in social work with a concentration in human services management from Boston University in 2000. She writes, "A colleague and I were invited to present at the national conference for the Association of Jewish Family and Children's Agencies in Baltimore in April 2005." She can be reached at amy.l.johnson@juno.com.

Michael F. Sutton, BS'97, MS'99, JD'04, is an associate in the Louisville office litigation department of Frost Brown Todd, a regional law firm that has been recognized by Corporate Board Member Magazine as the top corporate law firm in Kentucky. Sutton previously worked as a legal intern in the U.S. attorney general's office in Louisville.

**Melissa L. Boyd**, BA'99, writes, "After moving to Oregon and working in public health (maternal/child health), I became interested in midwifery. I currently attend a private midwifery college and am the conference coordinator for the 2004 International Waterbirth Congress. I am studying pre- and perinatal psychology and look forward to integrating this field into my work as a midwife." She lives in Portland, Ore., and can be reached at melissa.boyd@waterbirth.org.

Jared A. Hershenson, M.D., BS'99, ACJS'99, graduated from the Washington University School of Medicine and is doing his residency at Johns Hopkins Hospital in Baltimore, where he and his wife,

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## Alumni notebook

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Jessica, live. Their son, Samuel, was born on Jan. 12, 2004. He can be reached at jhershenson@hotmail.com.

Bradley S. Loveall, BA'99, MIS'03, is a programmer analyst with Promethius Consulting in Indianapolis.

Theresa D. Singer, BA'99, is a developmental reading and writing instructor at Vincennes University at Jasper. She writes that she is also "attending the California State University Master's of Humanities Program." E-mail the Huntingburg resident at tsinger@vupipeline.viu.edu.

## 2000s

**Jonathan B. Margolin**, PhD'00, is an evaluator of educational programs, products, and services for Learning Point Associates. He writes, "I would be happy to speak to people seeking more information about this career." He married Wendy M. Margolin, BAJ'00, AC JSt'00, in December 2001, and their daughter, Rachel, was born in March 2003. He lives in Chicago and can be reached at jwmargolin@aol.com.

Tim Siegert, CBusF'00, BA'00, MS'02, is a guidance counselor at Franklin Central High School in Indianapolis. His wife, Kelly Mason Siegert, BA'01, recently

earned a graduate degree in social studies education at Miami University. They live in Indianapolis and can be reached at siegiuhoops@hotmail.com.

Laura E. Dewitz, BA'01, is graduating this spring from Bowling Green State University, Ohio, with a master's degree in school counseling. She lives in Maumee, Ohio, and can be reached at ldewitz2002@yahoo.com.

**Nicholas T. Kapsa**, CBusF'01, BA'01, received a JD from the Roger Williams University Ralph R. Papatto School of Law in May 2004.

**Douglas B. Samuel**, BA'01, writes, "I am currently pursuing my PhD in clinical psychology at the University of Kentucky. I am studying the intersection between normal personality and personality disorders." The Lexington, Ky., resident can be reached at douglasbriansamuel@hotmail.com.

**Kylie A. Pepler**, BA'02, writes, "I am currently enrolled in the PhD program at UCLA's Graduate School of Education, Division of Urban Schooling. On New Year's Eve 2003, I married Eric Lindsay, BM'02, in Fort Wayne, Ind." She lives in Los Angeles and can be reached at kpepler@ucla.edu.

**Sarah E. (Meier) Sutton**, BA'02, writes, "I am applying to pharmacy school." She lives in Bloomington, Ind.,

and can be reached at sutton2@indiana.edu.

**Leah J. Dean**, BA'03, of Delavan, Wis., is a graduate student at John Jay College of Criminal Justice, studying forensic psychology. She can be reached at leahdean@hotmail.com.

**Lindsay N. Eichelman**, BA'03, received the 2003 Elizabeth Roberts Quackenbush Leadership Award from Alpha Xi Delta Fraternity. The award is presented to graduating senior women making significant contributions to the fraternity and through chapter loyalty, campus leadership, community service, and academic achievement. She lives in Indianapolis.

**Naomi E. Kahn**, BS'03, is a research assistant in the psychology department at Cincinnati Children's Hospital, and her husband, **Ari Joffe**, BS'03, is a law student at the University of Cincinnati.

Ashley Powell, BS'03, works at a domestic violence shelter in Sunman, Indiana. She plans to attend Boston College in the fall to pursue a master's in social work.

**Kelly K. (Roberson) Venman**, BS'04, was married to Ryan McCoy Venman on May 22, 2004. She writes, "I am starting my graduate classes for a master's in occupational therapy at Grand Valley State University." She lives in Wyoming, Mich., and can be reached at robersok@gvsu.edu.

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## What's new with you?

The IU Alumni Association is charged with maintaining records for all IU alumni. Please print as much of the following information as you wish. Its purpose, in addition to providing us with your class note, is to keep IU's alumni records accurate and up to date. To verify and update your information online, visit our online alumni directory at [www.alumni.indiana.edu/directory](http://www.alumni.indiana.edu/directory).

Publication carrying this form: *PsychNotes: Psychology Alumni Newsletter* Date \_\_\_\_\_

Name \_\_\_\_\_

Preferred Name \_\_\_\_\_

Last name while at IU \_\_\_\_\_ IU Degree(s)/Yr(s) \_\_\_\_\_

Soc. Sec. # or Student ID # \_\_\_\_\_

Home address \_\_\_\_\_ Phone \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Business title \_\_\_\_\_ Company/Institution \_\_\_\_\_

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Spouse name \_\_\_\_\_ Last name while at IU \_\_\_\_\_

IU Degree(s)/Yr(s) \_\_\_\_\_

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