

# RESEARCH BRIEFS

## Word Recognition



Lance Hahn

Associate Professor Lance Hahn of the Department of Psychology in the College of Education and Behavioral Sciences is determining how

the neural representation of a word affects the ease with which a word is read. The WKU Faculty Scholarship Council funded Dr. Hahn's research through a Summer Faculty Scholarship.

Reading one word appears to facilitate the recognition of related words. For instance, reading the

word "nurse" will enable a reader to recognize "doctor" faster than an unrelated word such as "bread." Establishing which words share meaning has often been determined with a free association task in which a group of people are asked to give a word in response to a cue word provided by the researcher. Given the word "nurse," most people respond with the word "doctor" while nobody responded with "bread."

While free association is certainly useful, it has several drawbacks. One drawback is that it only provides a single associated word for each cue word. This drawback is particularly burdensome if we are interested in individual differences in how

a specific word is represented. For instance, a nurse is likely to have a much more complex neural representation of the word "doctor" than the typical college student. Similarly, the neural representation of a word for a typical reader may be very different from the representation for an unskilled or impaired reader.

Dr. Hahn is developing new methods that extensively assess an individual's representation of a word. Such methods could enable educators to compare atypical readers with typical readers. These methods include extensions of the free association task and more complex computer-based tasks.

## Sources of Strain

Holli Drummond of the Department of Sociology in the Potter College of Arts and Letters is currently surveying 1,000 undergraduates in an effort to identify and evaluate sources of stress and strain among WKU students.

Specifically, she hopes to identify the prevalence of a variety of hardships stemming from academics, work, and personal relationships.

The second goal of the project is to evaluate the effectiveness of these stresses and strains at predicting negative emotions and behaviors such as depression, anger, anxiety, substance abuse, and eating disorders.

Finally, the project explores whether the reaction to any of these types of strain varies by personal characteristics such as race, gender, or class. Dr. Drummond's project is funded by a grant through the WKU Faculty Scholarship Council.



Holli Drummond





## Rewards Programs



Joana Phillips

Joanna Phillips of the Department of Marketing in the Gordon Ford College of Business is at work on a multi-stage research project to determine the value of relationship marketing programs in which many of us have participated. She is collaborating with Drs. Stephanie and Charles Noble of the University of Mississippi.

Most people are aware of loyalty programs, affinity programs, and special-treatment programs that portend to offer consumers various rewards in exchange for repeat patronage. Sponsoring companies spend large sums of money on these campaigns to increase clientele, but little research exists on the long-term benefits of these programs for the company.

Dr. Phillips is applying a research model that addresses how consumers are motivated by program rewards and policies, the resulting form of commitment evoked by intrinsically versus extrinsically motivated consumers, and how the nature of a consumer's commitment to a company influences both the lifelong financial and relational worth of the consumer to the company. A grant through the WKU Faculty Scholarship Council funds Dr. Phillips's work.



## Directed *ortho*-Metalation Chemistry

Research Professor Donald Slocum has a grant from the National Science Foundation to demonstrate a new approach to methodologies in *ortho*-metalation chemistry. His goal is to demonstrate use of "promoted" hydrocarbon media to provide safe, green, sustainable, synthetic procedures.



Donald Slocum

Dr. Slocum's research is of importance for pharmaceutical, biotechnology, nanotechnology, polymer, and specialty chemical companies. The overriding goal of the program is to provide environmentally friendly systems for potential large-scale operation.

Students initially assist in small projects and, once they attain suitable proficiency, undertake their own projects within this framework. In addition they provide reports. Once student progress nears completion, they are invited to make presentations. Completed work is published in major international chemistry journals with the students listed as coauthors.