



The Insider

Life Span Institute at Parsons

November 2010

Patty Black Moore, Editor

Assistive Technology for Kansans: Focus on accessible recreation

In Kansas, it's hunting season and at the Assistive Technology for Kansans (ATK) Tech Center in Parsons the boxes have been arriving for weeks now. The Tech Center is filled with a wide assortment of rifle mounts, bow mounts, autofocus binoculars, switch-activated cameras, fishing gear, accessible camping tents, ground blinds, trekking poles, as well as beach chairs, gardening tools and more. So what's up?

With a renewed focus on accessible recreation, ATK is expanding its ability to meet the needs of people with disabilities in a variety of adapted recreation activities. Recently, Sara Sack, ATK program director, traveled to Montana to meet with Dr. Kathy Laurin, Montana Assistive Technology Program, to learn more about the Montana Access to Outdoor Recreation (MATOR) program.

Back in Kansas, Dr. Sack and Sheila Simmons, ATK program coordinator, held a mini-summit and invited Dr. Laurin to come to Kansas to describe the MATOR program and demonstrate a broad variety of adapted recreation equipment. Dr. Laurin was joined by Chris Clasby, also with the Montana Tech Program. Chris provided a virtual review of available hunting and fishing equipment from a "sip-n-puff"* user's perspective as well as talked about new recreation products and solutions. See their work at <http://montech.ruralinstitute.umt.edu/MATP.asp>



Boy using adapted fishing gear.

Members of the ATK Advisory Council met with representatives from Kansas Health Policy Authority, Kansas Rehabilitation Services (VR),

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“Just the STATS”

Parsons faculty have increased external grant funding for the 5th year in a row and with the exception of one year, funding has reached its highest level in 50+ years.

PROJECT HIGHLIGHT



Transitional Analyses of Chronic Aberrant Behavior Across the Life Span 2

Dean Williams, Ph.D., is the Project Director. The project is funded by the National Institute of Child Health and Human Development.

Project Staff:

Kathryn Saunders, Ph.D., Yusuke Hayashi, Ph.D., Ibari Ezekwe, B.S., Shuan Tsau, B.A., Stephen Robertson, M.A., Parsons Research Center, Life Span Institute; Iser DeLeon, Ph.D. and SungWoo Kahng, Ph.D., Johns Hopkins School of Medicine.



Collaborating with: Johns Hopkins School of Medicine, University of Massachusetts School of Medicine, Kennedy Krieger Institute.

Project Summary:

This project is designed to increase basic knowledge of the etiology and maintenance of severe, chronic aberrant behaviors (CAB) and to develop treatments based on this knowledge. This research program translates basic-research findings from laboratory studies of both animal and human subjects, first to more naturalistic settings and activities, and then to clinical-treatment settings.

The laboratory studies have shown, paradoxically, that schedules of positive reinforcement can, in some circumstances, be aversive. When relatively rich conditions of positive reinforcement transition to relatively lean conditions of positive reinforcement, subjects show prolonged, counterproductive disruptions in behavior (pausing). Further, if

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a means of escape from the situation is provided, subjects escape. That is, negative incentive shifts are aversive, and thus motivate maladaptive escape behaviors. It is important to note that the relatively lean reinforcement conditions are not inherently aversive. It is the context that creates the aversiveness. In the laboratory, these findings have a great deal of generality. In the natural environment, schedules of positive reinforcement are ubiquitous. The present research program is the first to integrate these laboratory findings with the problem of chronic aberrant behavior.

In the clinic, a current, successful treatment strategy has been to identify the behavioral function of aberrant behavior on an individual basis and use this information to design treatment. Escape (negative reinforcement) has been shown to be a primary motive for the aberrant behavior of a substantial portion of treated individuals. Explaining, at a behavioral-process level, what makes certain activities aversive for some individuals has not been a primary goal of the treatment-oriented studies. Not surprisingly, given its paradoxical nature, the notion that escape can be a side effect of positive reinforcement has not been applied to either basic or clinical research in this area. Note that we do not suggest that negative incentive shifts account for all of aberrant behavior, or even all of escape-motivated aberrant behavior. Our preliminary work suggests, however, such pausing and escape can provide a functional

analogue to a clinically significant portion of aberrant behavior, in that conditions that generate long pausing may predict aberrant behavior.

The proposed research will test the utility of this conceptualization in predicting the occurrence of stereotyped and self-injurious behaviors in persons with intellectual developmental disabilities (IDD). In keeping with the translational nature of the research program, studies will be conducted in naturalistic and clinical settings. In the naturalistic setting, three studies are proposed for each of two CAB topographies (self injury/aggression and stereotypy). These studies will generally replicate laboratory procedures, but with modifications to better reflect the conditions of reinforcement and behaviors found in natural environments. In addition, aberrant behaviors, vocalizations, and other behaviors indicative of emotional responses will be observed.

Two experiments are proposed in clinical settings. The first is to predict conditions of incentive shift that produce CAB based on relative preference for daily activities. The second clinical study identifies functional reinforcers for CAB, and assesses rich and lean transitions and CAB based on natural, fluctuations in the quantity and quality of these reinforcers in daily clinical activities. This research strategy is geared towards better understanding of the behavioral processes that may provide the motivational conditions for CAB, and to begin the use of this knowledge for developing treatment strategies.

PUBLICATION

Stuber, G., & Patrick, R. (2010). Using school readiness data to support student learning: One state's story. *Phi Delta Kappan*, 92, 35-38.

PROJECT NEWS

Renee' Patrick, Ph.D., Director of Dual Diagnosis Treatment & Training Services, PSH&TC and University of Kansas Research Associate, received approval to do a study, *The Staff Checkup for Direct Care Provider Agencies*, with the staff at a community service provider agency.

Kate Saunders, Ph.D., Co-director of the Postdoctoral Training in Translational Research on Intellectual and Developmental Disabilities Project, recently announced that R. Michael Barker, Ph.D., Georgia State University, has entered the training program. The program fosters the development of researchers who are well prepared for a translational research career by supporting the active and continuous participation of the trainees in the translational research programs of their mentors, and the guided development of trainees' own lines of research. In keeping with the interdisciplinary, translational approach, program faculty come from several academic departments. Dr. Barker's mentors are Nancy Brady, Ph.D., Speech-Language-Hearing: Sciences and Disorders and Kate Saunders, Ph.D., Life Span Institute at Parsons.

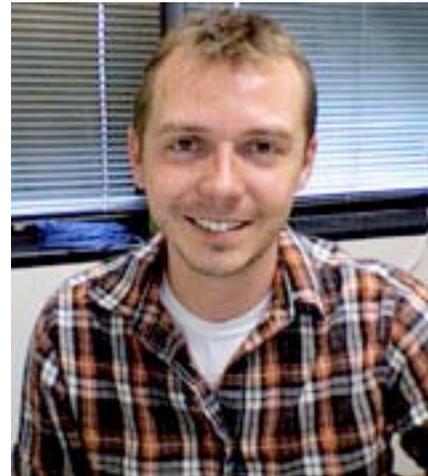
PARSONS RESEARCH CENTER WELCOMES

R. Michael Barker

Post-doctoral Fellow
Ph.D., Developmental Psychology
Georgia State University

My education background includes a B.S. in Psychology at Georgia State University in 2003, M.A. in Psychology at GSU in 2007, and Ph.D. at GSU in Developmental Psychology in 2010. I have a broad interest in symbol development in children with developmental disabilities, from the use of first words all the way through literacy development.

I chose the postdoctoral training program at KU because it provided me the unique opportunity to start a program of research that simply wasn't available at other institutions. I decided in 2008, when taking my general exam, that I wanted to start my research career that addressed the unanswered questions surrounding the development of phonological awareness and reading for individuals who use Augmentative and Alternative Communication devices as their primary mode of communication. KU provided a



unique opportunity for me to start this research for two reasons: Not very many people are conducting this research, and Kate Saunders and Nancy Brady were also very interested in starting an investigation into this area.

Kate Saunders and Nancy Brady are my postdoc supervisors. We are beginning to develop a phonological awareness assessment protocol for individuals who use AAC as their primary mode of communication. We plan to adapt the computerized teaching strategies that Kate uses in her work for assessment purposes for those who do not speak. In the long term, we hope to use what we learn developing the

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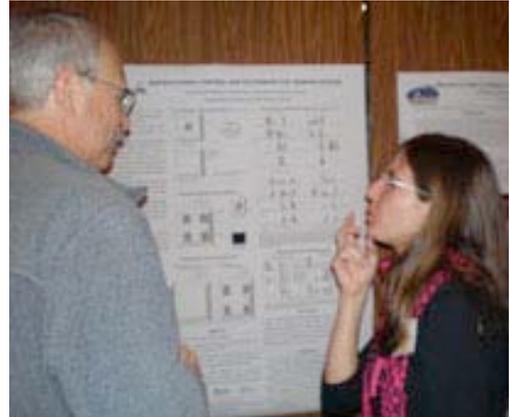
assessment to develop a reading intervention protocol for individuals in this population.

I grew up in Atlanta, Georgia. This is my first foray away from home. Needless to say, I'm

a little terrified of the first winter here. I'm a total Apple gadget nut, so I fit in well with the group at Parsons! I spend my free time tinkering with computers and electronics. Recently I've gotten into flying remote-controlled helicopters.

STAFF NEWS

Lidia Postalli, doctoral student in special education at Universidade Federal de São Carlos in São Carlos, São Paulo, Brazil is spending the fall semester studying with Dr. Kate Saunders, Life Span Institute at Parsons. In the picture, Lidia (right) discusses her research at the poster presentation at the annual meeting of the Southeastern Association for Behavior Analysis in Asheville, NC, on November 5.



David Lindeman, Ph.D. and Kathy Olson, Ph.D. served on the Planning Committee for Beyond the Diagnosis: Autism Across the Life Span Conference, October 14-15, 2010 at Johnson County Community College and at University of Kansas Edwards Campus.



Betty Forshey, pictured left, celebrated her recent retirement with a party at the Research Building on November 5th hosted by Life Span Institute at Parsons staff who have long appreciated beautifully polished floors, her bright smile and the many tasty treats she provided over the years. Betty, employed by the Parsons State Hospital & Training Center for 24 years, retired in October. Everyone enjoyed cake, punch and the fall decorations.

KU Security Training sponsored by LSI/Parsons. KU's Information Technology Security Office (ITSO) traveled to Parsons and provided two KU security training workshops on October 29 in the Media studio. 15 staff participated. The two-hour workshops covered how to *Stay Safe Online* and *Home Network & Computer Security*. Thanks to **Tony Grady**, Technical Liaison for Life Span Institute at Parsons, University of Kansas for coordinating the events of the day.

Dean Williams, Ph.D., served as a member on a scientific advisory panel for an autism research school in New York City, New York.

Life Span Institute at Parsons research staff recently attended a training seminar on functional analysis procedures. The training was provided by Lisa Toole and Griffin Rooker, Kennedy Krieger Institute of Johns Hopkins Medical School and hosted by the Parsons Research Center.

PRESENTATIONS

- Hayashi, Y., Williams, D. C., Brewer, A. T., Madden, G. J., Fowler, S. C., & Saunders, K. J. (2010, November). *Effects of discriminable shifts in reinforcer magnitude on induced attack in pigeons*. Poster session presented at the annual meeting of the Southeastern Association for Behavior Analysis, Asheville, NC.
- Lindeman, D.P., Rinkel, P., Nelon, C., & Miksch, P. (2010, October). *Training and technical assistance: An early childhood professional development system grows up*. Paper presented at the DEC 2010 26th Annual International Conference on Young Children with Special Needs and Their Families, Kansas City, MO.
- Olson, K.M. (2010, October). *Kansas College of Direct Support: Direct support staff training to meet your needs*. Presented at Beyond the Diagnosis: Autism Across the Life Span, Overland Park, KS.
- Olson, K.M. (2010, October). *Kansas College of Direct Support*. Exhibit at Power Up! 2010 Annual InterHab Conference, Wichita, KS.
- Olson, K.M., & Hermreck, D. (2010, October). *Kansas College of Direct Support*. Presented at Power Up! 2010 Annual InterHab Conference, Wichita, KS.
- Patrick, R. (October, 2010). *Autism resources for diagnosis and referral*. Presentation at the Childcare Professional Development Conference, Labette Community College, Parsons, KS.
- Patrick, R. (2010, November). *Treatment of Asperger syndrome disorder*. Presented to Bert Nash Child and Family Services, Lawrence, KS.
- Postalli, L.M.M. & de Souza, D.G. (2010, November). *Instructional control and recombinaive generalization*. Poster session presented at the annual meeting of the Southeastern Association for Behavior Analysis, Asheville, NC.
- Rinkel, P. (2010, October). *Pivotal response treatment: Navigating an online training module*. Presentation at Beyond the Diagnosis: Autism Across the Lifespan Conference, Overland Park, KS.
- Rinkel, P., Diehl, S., & Blair, J. (2010, October). *Supporting all learners*. Inservice at Junction City, KS.
- Rinkel, P., & Kongs, C. (2010, October) *Embedding, differentiating, and monitoring instruction: It's all in a good day of play!* Inservice at Kansas City, KS.
- Rinkel, P., & Lindeman, D.P. (2010, October). *Intentional intervention through intensive technical assistance*. Poster presented at the DEC 2010 26th Annual International Conference on Young Children with Special Needs and Their Families, Kansas City, MO.
- Rosenberg, S., & Teel, K. (2010, November). *CAPTA implementation: Collaboration challenges between child welfare & Part C early intervention*. KITS Sponsored Presentation at Kansas Governor's Conference for the Prevention of Child Abuse and Neglect. Wichita, KS.
- Stremel Thomas, K. (October, 2010). *Implications for team planning & implementation: Children with cochlear implants having multiple disabilities*. Inservice Training for Maize ESD, Maize, KS.
- Stremel Thomas, K., & Bashinski, S. (2010, November). *Cochlear implants for young children with deaf-blindness: Using Language Environmental Analysis technology*. Exhibit at the National Center for Technology Innovation, Washington, DC.
- Williams, Dean. (2010, October). *Understanding problem behaviors and transitions between activities: Bench and bedside translational research*. Invited address to the New York State Institute for Basic Research on Developmental Disabilities, Staten Island, NY.

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Williams, Dean. (2010, October). *In pursuit of relevance: Translational research*. Invited presentation at the 9th Annual Mid-American Association for Behavior Analysis (MABA) convention, Lake Geneva, WI.

NEW GRANT/RENEWAL ANNOUNCEMENT

Renee' Patrick, Ph.D., University of Kansas Research Associate, received a one-year renewal of the School Readiness Project, funded by the Kansas State Department of Education.

STAFF PROFILE

John Colbert II Research Assistant



I work as a research assistant with Kate Saunders and Katie Hine. The name of the project is Treatment Generalization and Contingency Coherence, a Component of Translational Analysis of Chronic Aberrant Behavior Across the Life Span. The goal of this project is to develop methods for transferring treatment gains to the individual's typical environment—the environment within which the problem behaviors initially occurred.

Unlike many of the research assistants I was born and raised right here in Parsons, Kansas. I attended Parsons High School and am working towards obtaining an Associate Degree at Labette Community College. Eventually, I hope to move on to a larger university and continue with my education. My interests are lengthy and too long to list but in time I hope to have a career in relationship counseling with an emphasis on marriage counseling.

I have been happily married for seven years to my beautiful wife Tammy. She works as the billing manager for Cytocheck Laboratories here in Parsons. We have one child, Jonathan, who is

a freshman at Parsons High School. My youngest sister, Darius, also lives with us and completes our family. She is a freshman at Labette County High School in Altamont.

We are very active and try to stay in shape by participating in various sports and activities in the community. I work at the Youth Crisis Shelter in Parsons part time and that is also extremely fulfilling. Family is my biggest personal interest and I am an avid Kansas City Chiefs fan. I love to cook out on the weekends and have friends over to watch the games. I appreciate the opportunity to join you all here at Life Span Institute at Parsons and hope to get to know some of you better.

ATK ... continued from page 1

Kansas Infant Toddler Services (tiny-k), Kansas AgrAbility, Inclusive Community Gardening Project, KATCO, consumers, service providers, and others to learn more about the newly available recreational equipment and opportunities.

Much of the newly acquired inventory was available to look at, peer through, sit on, and get in. Energized by the enthusiasm of the attendees, ATK has prioritized making adapted recreation devices more readily available to Kansans through their popular “try before you buy” equipment loan program.



Adapted recreational equipment includes a variety of accessible camping tents and hunting blinds.

Visit the new ATK website and take a look at the many recreational devices available. Devices can be requested using an email link on the ATK website at <http://www.atk.ku.edu>, calling the ATK Loan System (785-827-9383), or calling a regional Assistive Technology (AT) Site (800-526-3648).



Hunting equipment examples include a shooting mount for a rifle/gun – adaptations for a sip-n-puff user.

Another example of adapted equipment - a shooting scope with a camera display.



* Sip-n-puff devices are widely used for controlling a powered wheelchair. In a sip-n-puff system, the user gives commands to the chair by “sipping” (inhaling) and “puffing” (exhaling) on a pneumatic tube. This method works, basically, on the amount of pressure applied to the pneumatic tube and whether the sign of the pressure is negative or positive (indicating sipping or puffing, respectively). Sharp sips and puffs can be used to change the speed and direction of the wheelchair. Steering is accomplished by lower-level sips and puffs.

Sip-n-puff explanation provided at this website - http://atwiki.assistivetech.net/index.php/Alternative_wheelchair_control

Visit the Life Span Institute (LSI) at Parsons website at <http://www.parsons.lsi.ku.edu>