

Biomedical/Education Update:

Computer program teaches emotions

A new interactive computer program called "Mind Reading," developed by researchers at Cambridge University, is designed to aid people with autism spectrum disorders in identifying emotions.

The program uses actors to demonstrate a wide range of emotions, with six video clips and six audio clips portraying each emotion. Overall, the program includes nearly 5000 video and audio clips. In addition, it includes lessons, quizzes, and a "Games Zone" featuring "Harry Potter" actor Daniel Radcliffe.

The program is designed for both adults and children age 4 and above, and uses actors of a variety of ages. Program users can also select a "virtual" adult, child, or robot cartoon character to serve as a guide. The program also offers collectible rewards for studying sections and completing them successfully.

The "Mind Reading" program was developed by Simon Baron-Cohen, Jacqueline Hill, Ofer Golan, and Sally Wheelwright.

Additional information available at <http://www.human-emotions.com/mindreading/faq.asp>.

Habit reversal reduces Tourette syndrome tics

A technique called "habit reversal" can significantly reduce the incidence of vocal tics in children with Tourette syndrome (TS), according to a recent study. Many children with autism are co-diagnosed with TS.

Habit reversal for TS consists of several steps, including:

- Making the child aware of a tic—for instance, by having the child observe the tic in the mirror and note which muscles are involved.
- Having the child note (verbally, by raising a hand, or by other means) each time he or she notices a tic occurring.
- Having the child record the occurrence of each tic in writing.
- Training the child to perform a "competing response" in place of the tic. The competing response should be incompatible with the tic; for instance, in this study, children were taught to do diaphragmatic breathing (deep breaths from the abdomen) each time they became aware of the onset of a vocal tic or an urge to tic.
- Providing feedback, support, and encouragement to the child.

Douglas Woods and colleagues tested the effectiveness of habit reversal in reducing the vocal tics of five children, ranging in age from

10 to 13, with TS. The researchers report that four of the children exhibited immediate and significant reductions in vocal tics when they underwent habit reversal training, with an overall tic reduction of 82 percent.

Three of the children continued to show a reduction in vocal tics at a three-month follow-up. Moreover, no increase was seen in motor tics, which were not addressed by the treatment.

"Treatment of vocal tics in children with Tourette syndrome: investigating the efficacy of habit reversal," Douglas W. Woods, Michael P. Twohig, Christopher A. Flessner, and Timothy J. Roloff, *Journal of Applied Behavior Analysis*, Vol. 36, No. 1, Spring 2003, 109-12. Address: Douglas W. Woods, Department of Psychology, Box 413, University of Wisconsin-Milwaukee, Milwaukee, WI 53201, dwoods@uwm.edu.

House: schools can't require psych drugs

The U.S. House of Representatives passed a bill in May to prohibit schools from requiring children with behavior problems to take psychotropic drugs as a prerequisite for attendance.

The bill states that schools can discuss children's behavior or academic problems with parents but protects parents against "being coerced into administering a controlled substance in order to attend school, and for other purposes," and requires states receiving federal education money to enforce this rule. In addition, the bill calls for a Congressional investigation into the use of psychotropic drugs in schools.

To date, the Senate does not have a similar bill under consideration.

"House OKs ban on forcing kids' medication," Elizabeth Wolfe, Associated Press, May 24, 2003.

Pre-vaccination screens recommended

Newborns should be screened for impaired immunity before receiving vaccinations, according to researchers and parents involved in developing screening criteria.

Researchers involved in this project say that while levels of IgE antibodies are normally negligible in newborns, approximately 5 percent of infants have elevated IgE levels suggesting immune system dysfunction that could result in severe reactions to vaccines.

Information on the proposed pre-vaccination screening program is available at www.voicesofsafety.com/ph/neonatal-umbilical-cord-ige-tests.htm.

PLAY Project reports high success rate

The PLAY Project, at the University of Michigan, reports that approximately half of the children enrolled in its program show remarkable benefits after one year of therapy.

The project's approach, based in large part on techniques developed by Stanley Greenspan, is an intensive method based on guided play. Parents spend several hours per day in structured play interaction, engaging their children in activities that the children find fun and comfortable and using these activities to build relational skills. For instance, says Rick Solomon, chief of Behavioral and Developmental Pediatrics at the University of Michigan Health System and developer of the PLAY Project, if a child likes to open and close doors, the parents first share the experience playfully, and then begin to engage the child, saying 'open' and 'close', extending and building on the natural interaction. Eventually, says Solomon, as the children learn language from these interactions, "they begin to control the environment around them by using their language, and before you know it, you have two-way communication."

Parents using the PLAY techniques are supervised by a consultant who makes monthly home visits, uses videos and modeling to teach the techniques, defines goals, and assesses the effectiveness of the training.

A one-year pilot study of 41 young autistic children participating in the PLAY Project showed that half of the children made good to excellent progress, as measured by autism severity scales and independent assessments of videotapes, and another third made fair progress. Children whose parents spent 15 hours or more per week in play sessions made more progress than those who received less therapy, and children with additional physical or developmental problems tended to show the least improvement. No control group was included.

The PLAY Project enrolls children between 18 months and five years of age. The children in the study were an average of three and a half years old.

"Autistic kids make progress with PLAY," press release, May 1, 2003, University of Michigan Health System.

—and—

"The PLAY Project: a journey of hope," University of Michigan Health System, www.med.umich.edu/1libr/yourchild/playproject.htm.

—and—

"Pushing PLAY," *Medicine at Michigan*, University of Michigan Medical School, Vol. 4, No. 3, Fall 2002.