

Toronto 2002





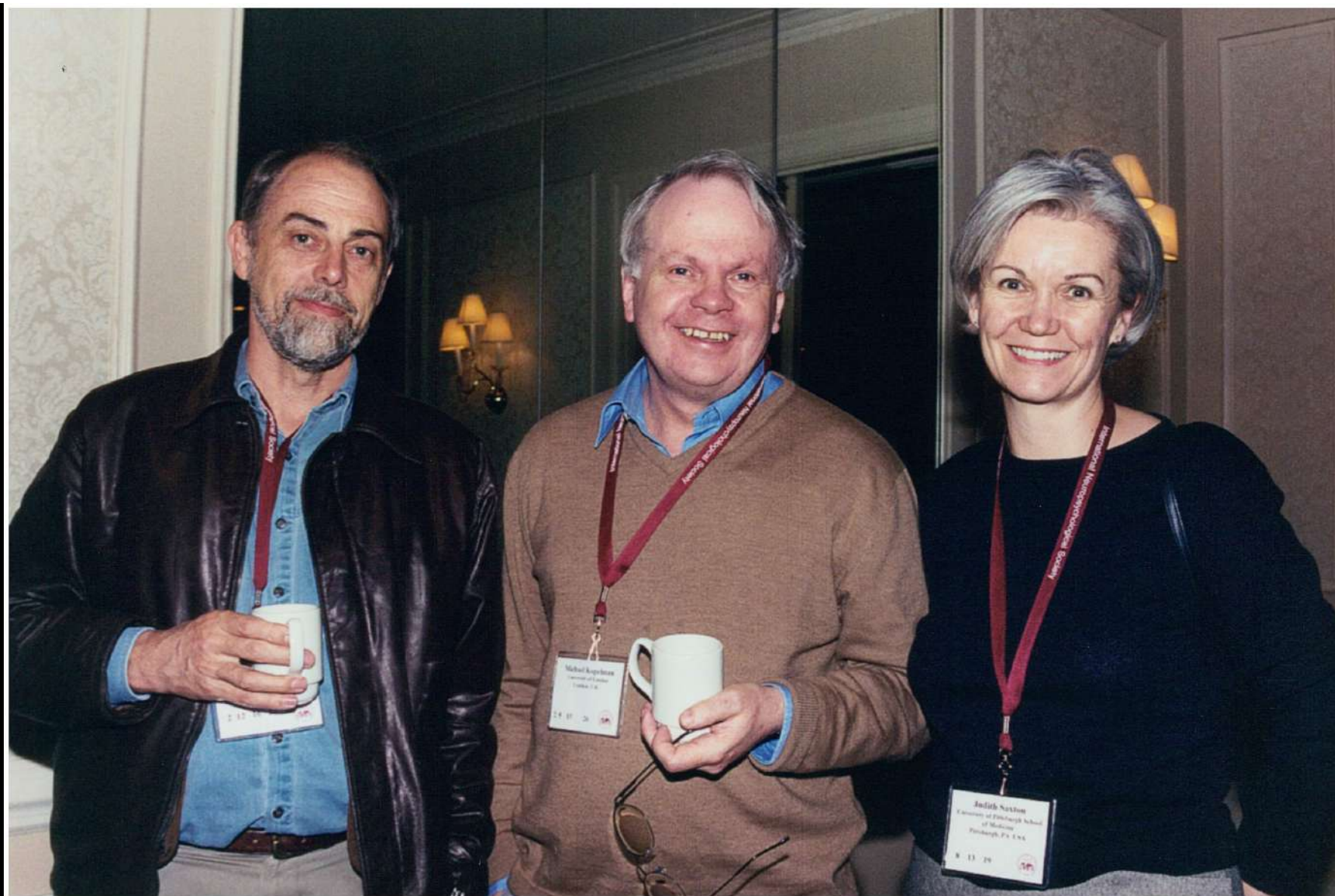




























































PCS Symptom Clusters: Further Evidence for Nonspecificity?

John Gunstad
Julie A. Suhr
Ohio University

INTRODUCTION

Individuals who suffer a traumatic event (e.g., natural disaster, terrorism, sexual assault, etc.) often experience a variety of psychological and physical symptoms. These symptoms are often grouped into clusters, such as the Post-Traumatic Stress Disorder (PTSD) cluster, the Acute Stress Disorder (ASD) cluster, and the Generalized Anxiety Disorder (GAD) cluster. However, the validity of these clusters has been questioned. Some researchers argue that these clusters are not distinct entities, but rather, they are simply different manifestations of a single underlying process. This study was designed to test the validity of these clusters by examining the relationships between various symptoms and the clusters they are assigned to.

The results of this study suggest that the clusters are not distinct entities, but rather, they are simply different manifestations of a single underlying process. This finding has important implications for the diagnosis and treatment of individuals who experience traumatic events. It suggests that a more comprehensive approach to assessment and treatment is needed, one that takes into account the full range of symptoms experienced by these individuals.

METHOD

Participants
Participants were 120 undergraduate students (60% female) who were recruited from a psychology course at Ohio University. They ranged in age from 18 to 25 years old (M = 19.5, SD = 2.5). All participants were paid for their participation in the study.

Measures
A battery of self-report measures was administered to participants. These measures included the Post-Traumatic Stress Disorder (PTSD) Symptom Scale (PSS), the Acute Stress Disorder (ASD) Symptom Scale (ASSD), and the Generalized Anxiety Disorder (GAD) Symptom Scale (GASSD). Each scale consists of 10 items, with higher scores indicating more severe symptoms.

Procedure
Participants completed the measures in a group setting. They were first asked to complete the PSS, followed by the ASSD, and then the GASSD. The order of the measures was randomized. Participants were given 10 minutes to complete each measure. The data were then analyzed using Pearson's correlation coefficient.

Results
The results of the study are presented in Table 1. The table shows the correlations between the PSS, ASSD, and GASSD. The correlations are all positive, indicating that individuals who score high on one measure also tend to score high on the others. This finding supports the idea that these clusters are not distinct entities, but rather, they are simply different manifestations of a single underlying process.

Conclusion
The results of this study suggest that the clusters are not distinct entities, but rather, they are simply different manifestations of a single underlying process. This finding has important implications for the diagnosis and treatment of individuals who experience traumatic events. It suggests that a more comprehensive approach to assessment and treatment is needed, one that takes into account the full range of symptoms experienced by these individuals.

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RESULTS

Table 1
Correlations among the PSS, ASSD, and GASSD

	PSS	ASSD	GASSD
PSS	1.00		
ASSD	.65**	1.00	
GASSD	.58**	.62**	1.00

Note. PSS = Post-Traumatic Stress Disorder Symptom Scale; ASSD = Acute Stress Disorder Symptom Scale; GASSD = Generalized Anxiety Disorder Symptom Scale. **p < .01.

Table 2
Correlations among the PSS, ASSD, and GASSD (continued)

	PSS	ASSD	GASSD
PSS	1.00		
ASSD	.65**	1.00	
GASSD	.58**	.62**	1.00

Note. PSS = Post-Traumatic Stress Disorder Symptom Scale; ASSD = Acute Stress Disorder Symptom Scale; GASSD = Generalized Anxiety Disorder Symptom Scale. **p < .01.









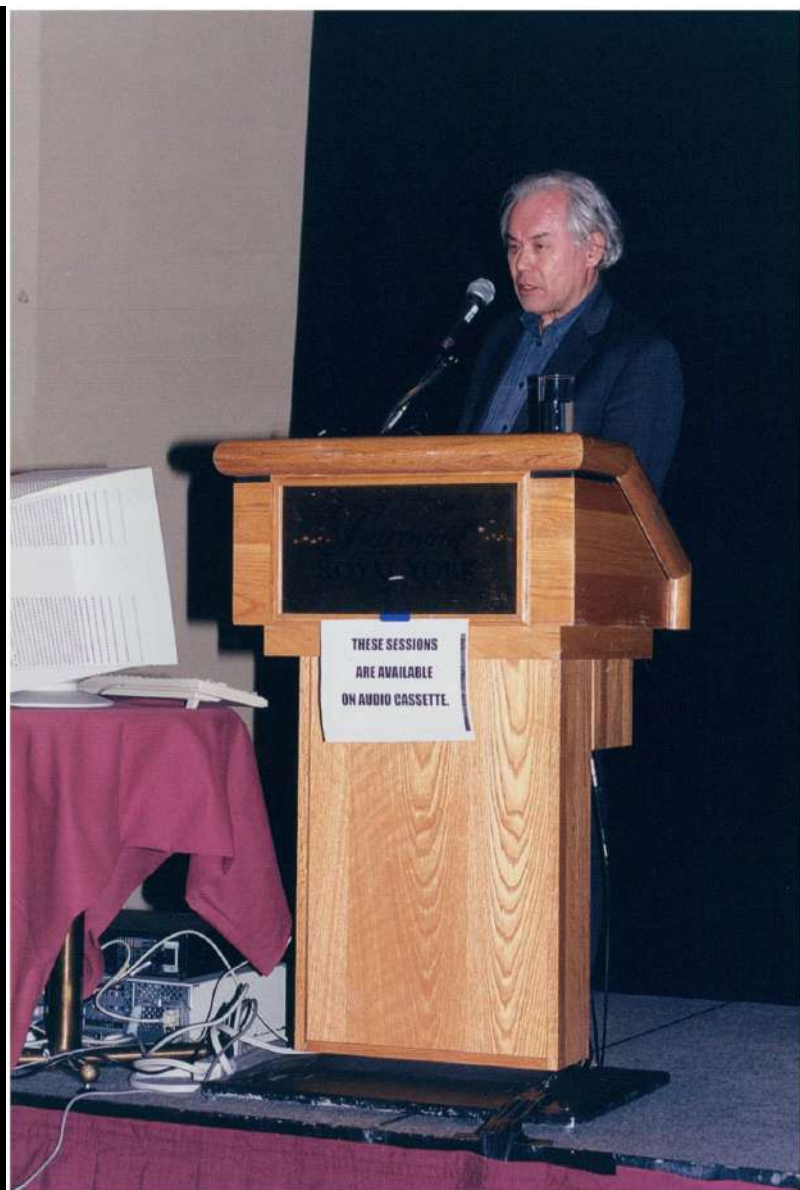










































































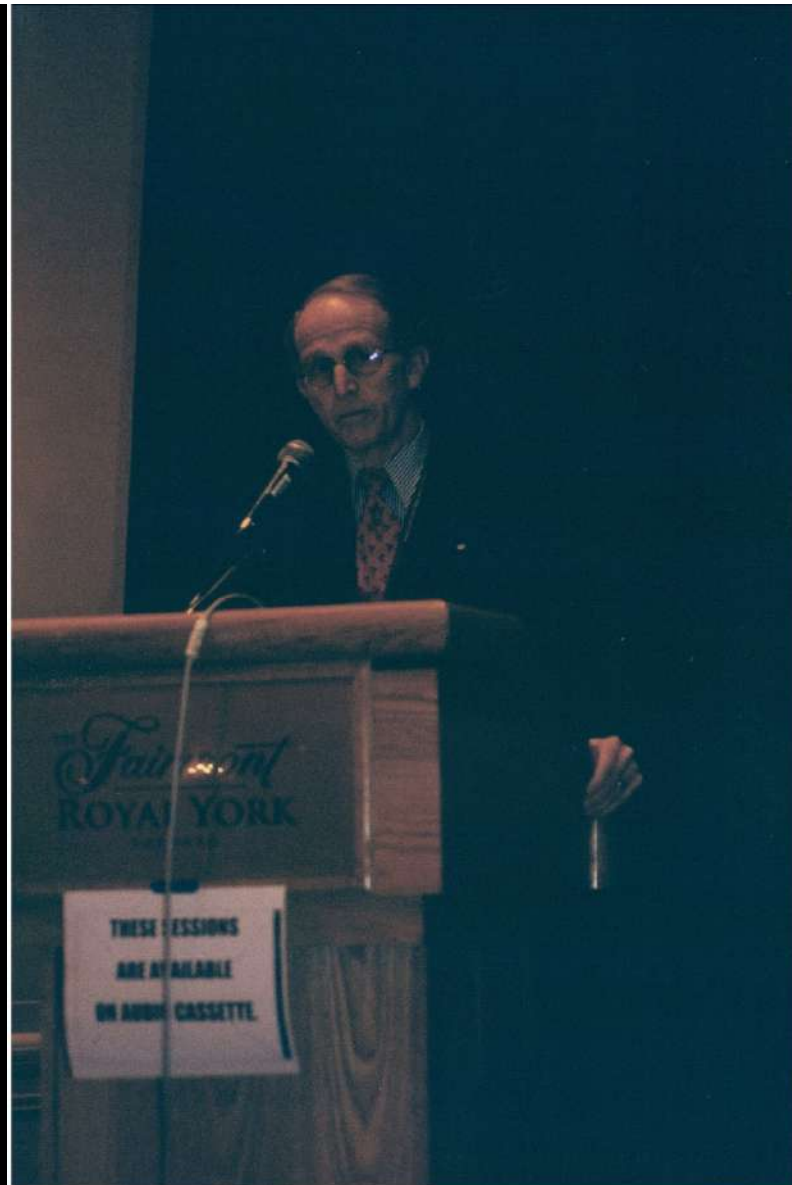


















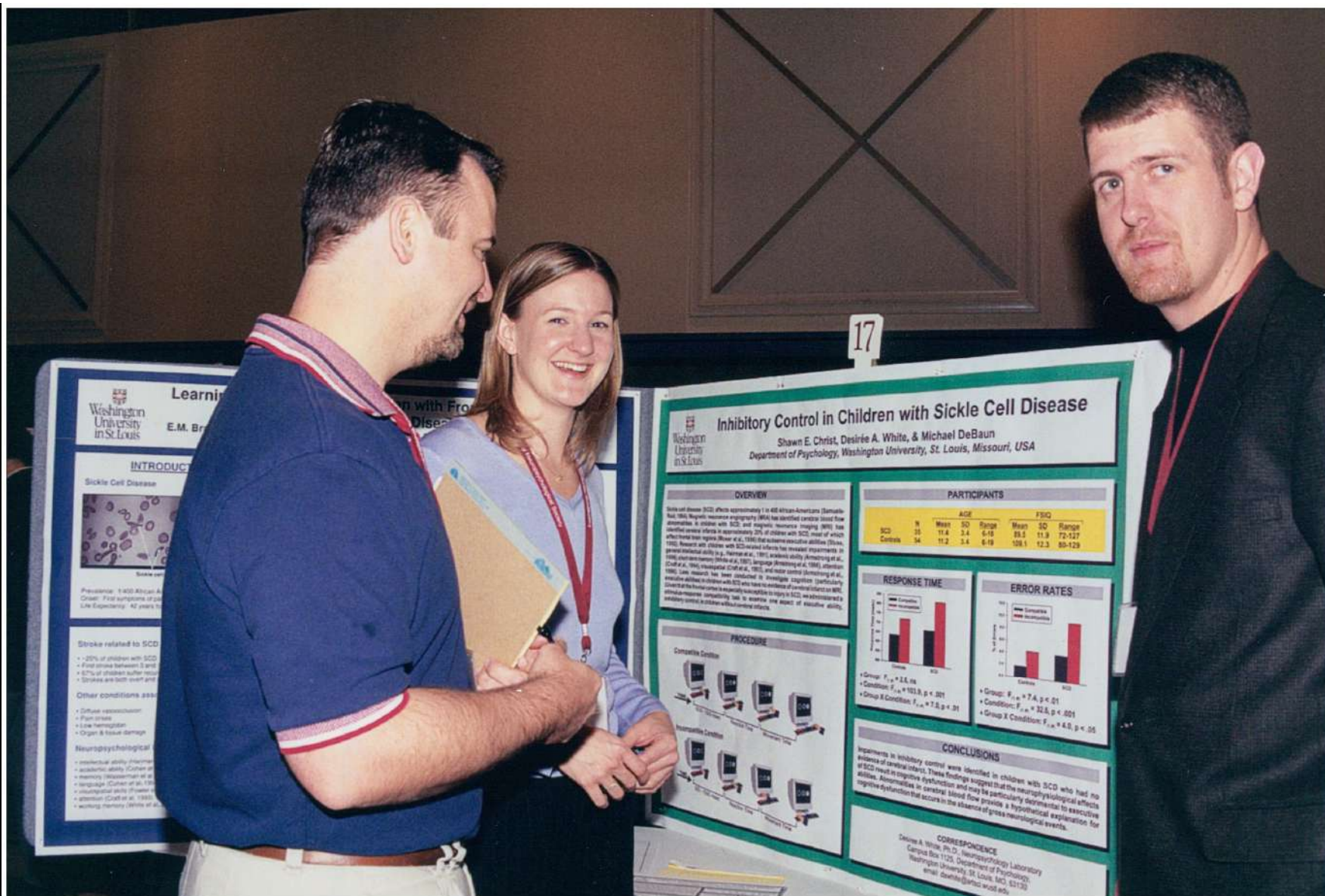












Washington University in St. Louis
Learning with Friends
E.M. Br...

INTRODUCTION
Sickle Cell Disease

Prevalence: 1-100 African American
 Onset: First symptoms at age 6
 Life Expectancy: 42 years

Stroke related to SCD

- 20% of children with SCD
- First stroke between 5 and 10 years of age
- 67% of children suffer recurrent strokes
- Strokes are both silent and symptomatic

Other conditions associated with SCD

- Diffuse vaso-occlusion
- Pain crises
- Low hemoglobin
- Organ & tissue damage

Neuropsychological

- Intellectual ability (normal)
- Academic ability (normal)
- Memory (impaired) at 6-10 years
- Language (Cohen et al, 1999)
- Attention (Coff et al, 1999)
- Working memory (White et al, 2000)

Washington University in St. Louis

Inhibitory Control in Children with Sickle Cell Disease

Shawn E. Christ, Desirée A. White, & Michael DeBaun
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OVERVIEW

Sickle cell disease (SCD) affects approximately 1 in 400 African-Americans (Hamblin-Hood, 1993). Magnetic resonance angiography (MRA) has identified cerebral blood flow abnormalities in children with SCD, and magnetic resonance imaging (MRI) has identified cerebral infarcts in approximately 20% of children with SCD, most of which are silent (Hamblin-Hood et al., 1999). Research with children with SCD-related infarcts has revealed impairments in general intellectual ability (e.g., Hamblin et al., 1991), academic ability (Hamblin et al., 1999), and memory (White et al., 2000). Large-scale research has been conducted to investigate cognitive (particularly executive) abilities in children with SCD who have no evidence of cerebral infarcts on MRA. Christ et al. (2000) found that children with SCD who have no evidence of cerebral infarcts on MRA, but who have cognitive impairments, may be at risk for cognitive impairment in the absence of gross neurological events.

PARTICIPANTS

Group	N	AGE			FSDQ		
		Mean	SD	Range	Mean	SD	Range
SCD	15	11.6	3.4	6-18	95.5	11.9	72-127
Controls	34	11.2	3.4	6-18	108.1	12.3	80-129

RESPONSE TIME

Bar chart showing Response Time (ms) for SCD and Controls groups. SCD group shows significantly higher response times than Controls group.

• Group: $F_{(1,49)} = 2.6, ns$
 • Condition: $F_{(1,49)} = 103.9, p < .001$
 • Group X Condition: $F_{(1,49)} = 7.8, p < .01$

ERROR RATES

Bar chart showing Error Rates (%) for SCD and Controls groups. SCD group shows significantly higher error rates than Controls group.

• Group: $F_{(1,49)} = 7.4, p < .01$
 • Condition: $F_{(1,49)} = 32.5, p < .001$
 • Group X Condition: $F_{(1,49)} = 4.0, p < .05$

PROCEDURE

Diagram illustrating the experimental procedure. The Competitive Condition involves a choice between two stimuli (e.g., a red dot and a green dot) and a response (e.g., pressing a red button or a green button). The Incentive Condition involves a choice between two stimuli (e.g., a red dot and a green dot) and a response (e.g., pressing a red button or a green button) that results in a reward (e.g., a red dot or a green dot).

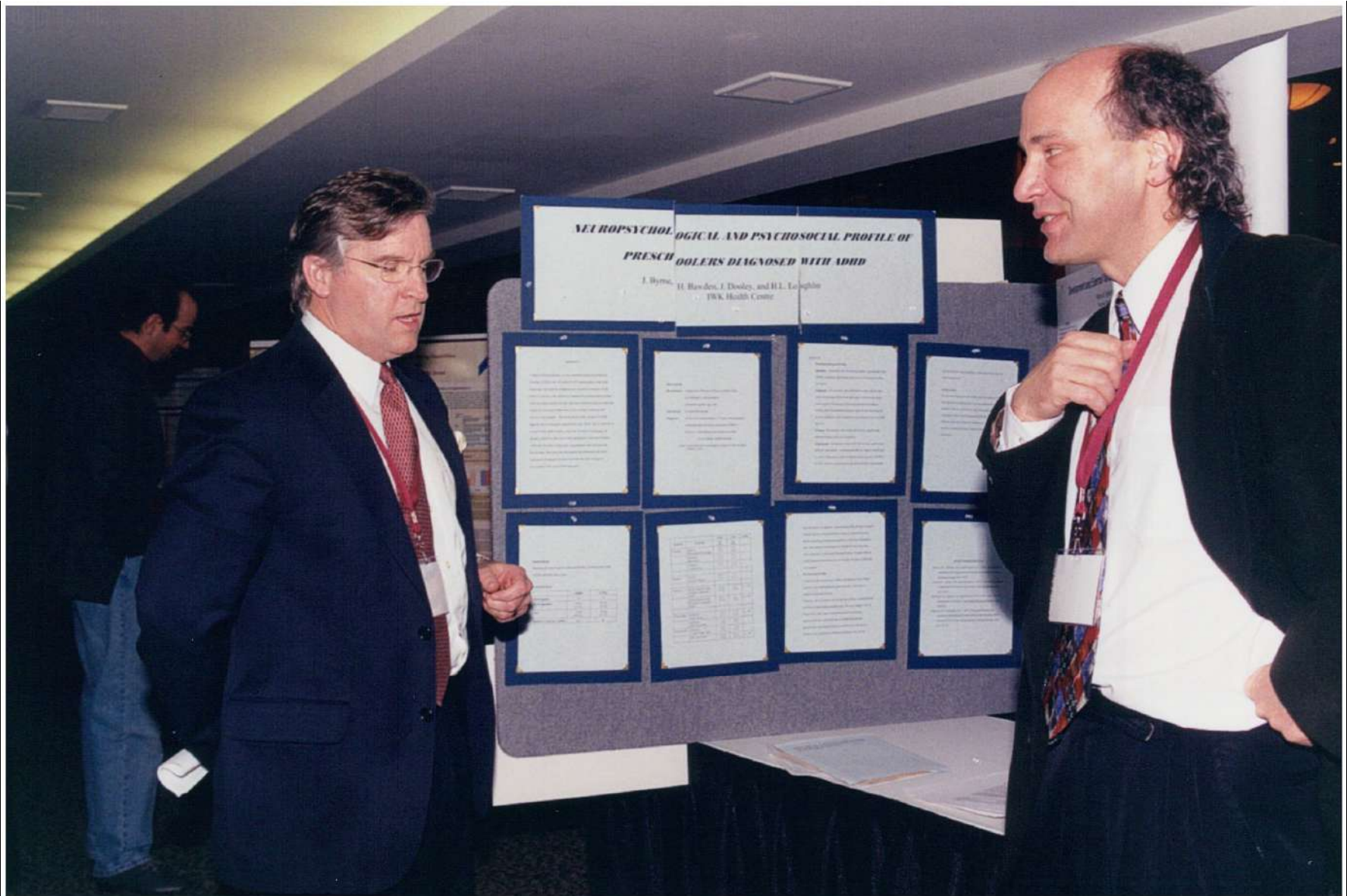
CONCLUSIONS

Impairments in inhibitory control were identified in children with SCD who had no evidence of cerebral infarcts. These findings suggest that the neurophysiological effects of SCD result in cognitive dysfunction and may be particularly detrimental to executive abilities. Abnormalities in cerebral blood flow provide a hypothetical explanation for cognitive dysfunction that occurs in the absence of gross neurological events.

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Waikiki 2003

































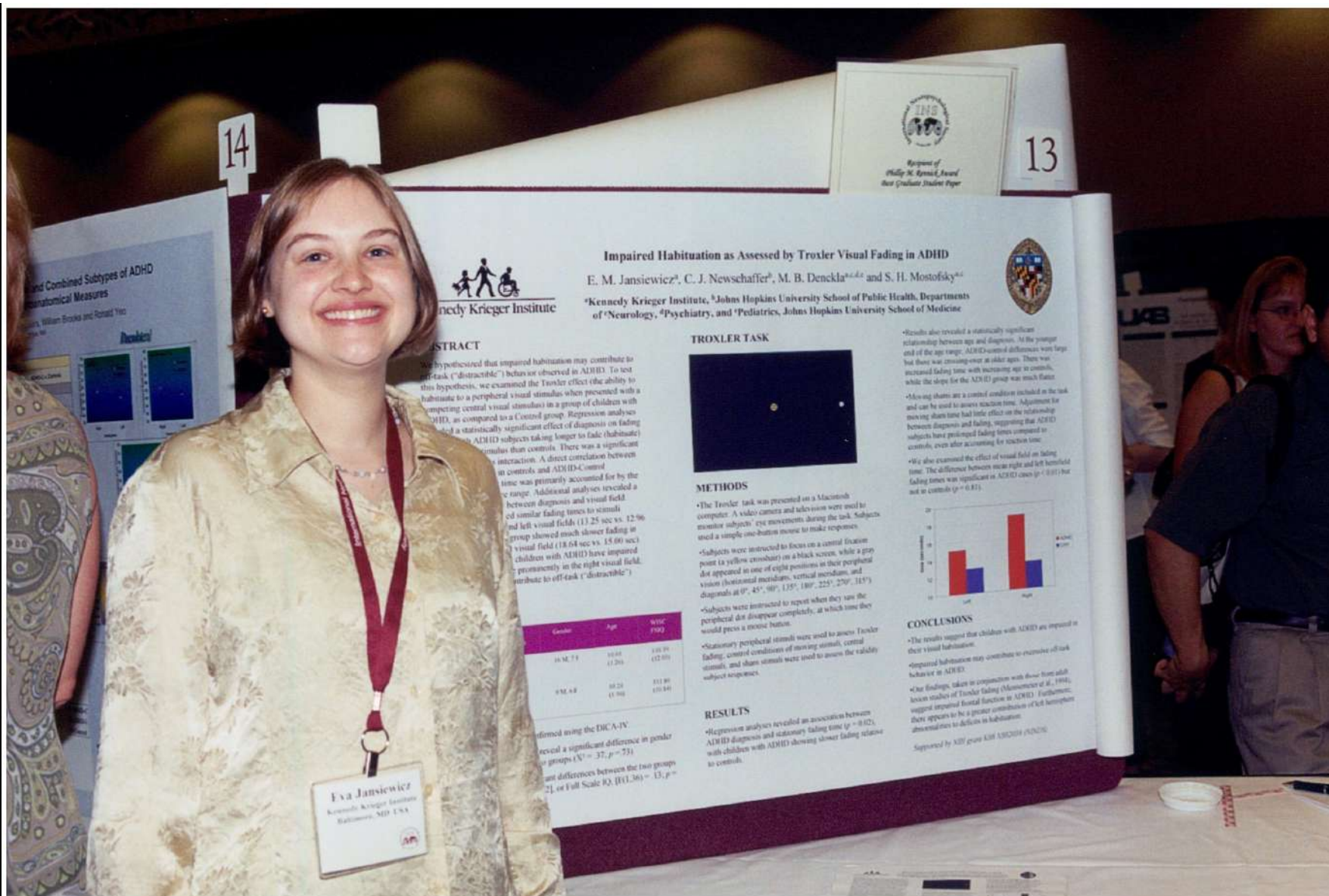












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Recipient of
Philip M. Reynolds Award
Best Graduate Student Paper



Impaired Habituation as Assessed by Troxler Visual Fading in ADHD

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ABSTRACT

We hypothesized that impaired habituation may contribute to off-task ("distractible") behavior observed in ADHD. To test this hypothesis, we examined the Troxler effect (inability to habituate to a peripheral visual stimulus when presented with a competing central visual stimulus) in a group of children with ADHD, as compared to a Control group. Regression analyses revealed a statistically significant effect of diagnosis on fading times, with ADHD subjects taking longer to fade (habituate) to stimuli than controls. There was a significant interaction. A direct correlation between fading time and ADHD-IV score was found. Fading time was primarily accounted for by the age range. Additional analyses revealed a significant interaction between diagnosis and visual field. Children with ADHD showed much slower fading in the right visual field (18.64 sec vs. 15.00 sec) than controls. Children with ADHD have impaired habituation in the right visual field, which may contribute to off-task ("distractible") behavior.

Gender	Age	WISC-III IQ
16 M, 7 F	10.04 (1.26)	100.74 (12.05)
9 M, 6 F	10.24 (1.70)	111.80 (10.84)

performed using the DICA-IV. We found a significant difference in fading times between the two groups (F(1,36) = 13.7, p = 0.001). Significant differences between the two groups (F(1,36) = 13.7, p = 0.001).

TROXLER TASK



METHODS

- The Troxler task was presented on a Macintosh computer. A video camera and television were used to monitor subjects' eye movements during the task. Subjects used a simple one-button mouse to make responses.
- Subjects were instructed to focus on a central fixation point (a yellow crosshair) on a black screen, while a gray dot appeared in one of eight positions in their peripheral vision (horizontal meridians, vertical meridians, and diagonals at 0°, 45°, 90°, 135°, 180°, 225°, 270°, 315°).
- Subjects were instructed to report when they saw the peripheral dot disappear completely, at which time they would press a mouse button.
- Stationary peripheral stimuli were used to assess Troxler fading; control conditions of moving stimuli, central stimuli, and sham stimuli were used to assess the validity of subject responses.

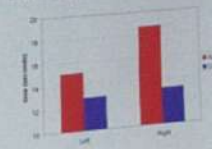
RESULTS

Regression analyses revealed an association between ADHD diagnosis and stationary fading time ($p = 0.02$), with children with ADHD showing slower fading relative to controls.

Results also revealed a statistically significant relationship between age and diagnosis. At the younger end of the age range, ADHD-control differences were large, but there was crossing-over at older ages. There was increased fading time with increasing age in controls, while the slope for the ADHD group was much flatter.

Moving shams are a control condition included in the task and can be used to assess fixation time. Adjustment for moving sham time had little effect on the relationship between diagnosis and fading, suggesting that ADHD subjects have prolonged fading times compared to controls, even after accounting for fixation time.

We also examined the effect of visual field on fading time. The difference between mean right and left hemifield fading times was significant in ADHD cases ($p < 0.01$) but not in controls ($p = 0.81$).



CONCLUSIONS

- The results suggest that children with ADHD are impaired in their visual habituation.
- Impaired habituation may contribute to excessive off-task behavior in ADHD.
- Our findings, taken in conjunction with those from adult lesion studies of Troxler Fading (Mannes et al., 1994), suggest impaired frontal function in ADHD. Furthermore, there appears to be a greater contribution of left hemisphere abnormalities to deficits in habituation.

Supported by NIH grant R01 NS02014 (NIMH)

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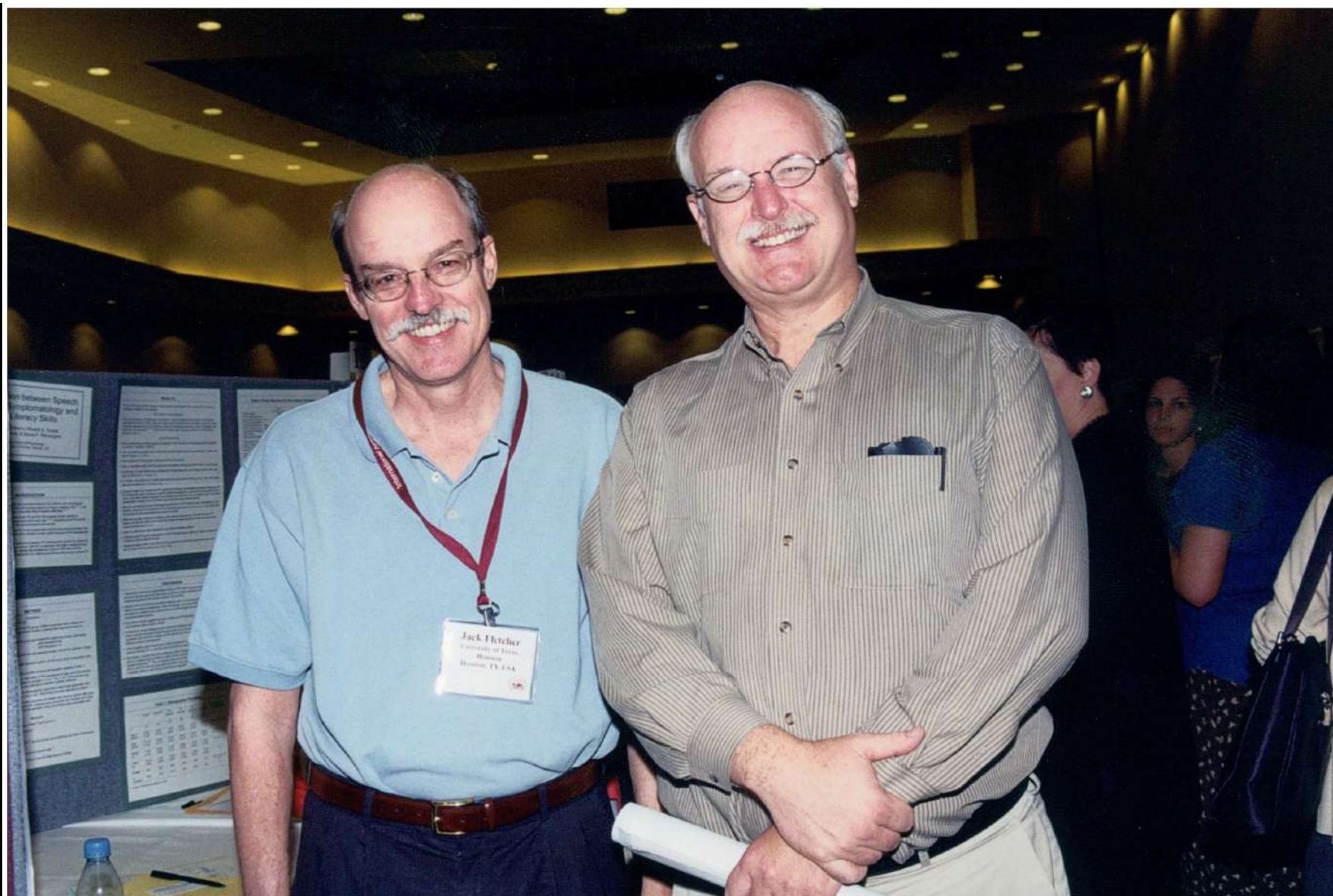










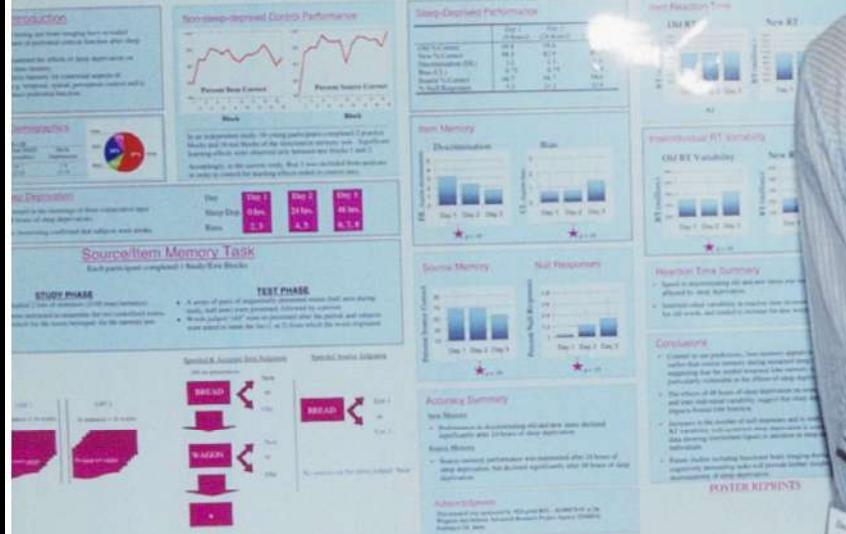




EFFECTS OF SUSTAINED SLEEP DEPRIVATION ON SOURCE MEMORY

D. Wegesin¹, J. Ream¹, R. Basner², Y. Stern¹

¹Cognitive Neuroscience Division, G.H. Sergievsky Center, and ²Department of Medicine
Columbia University, New York, New York



















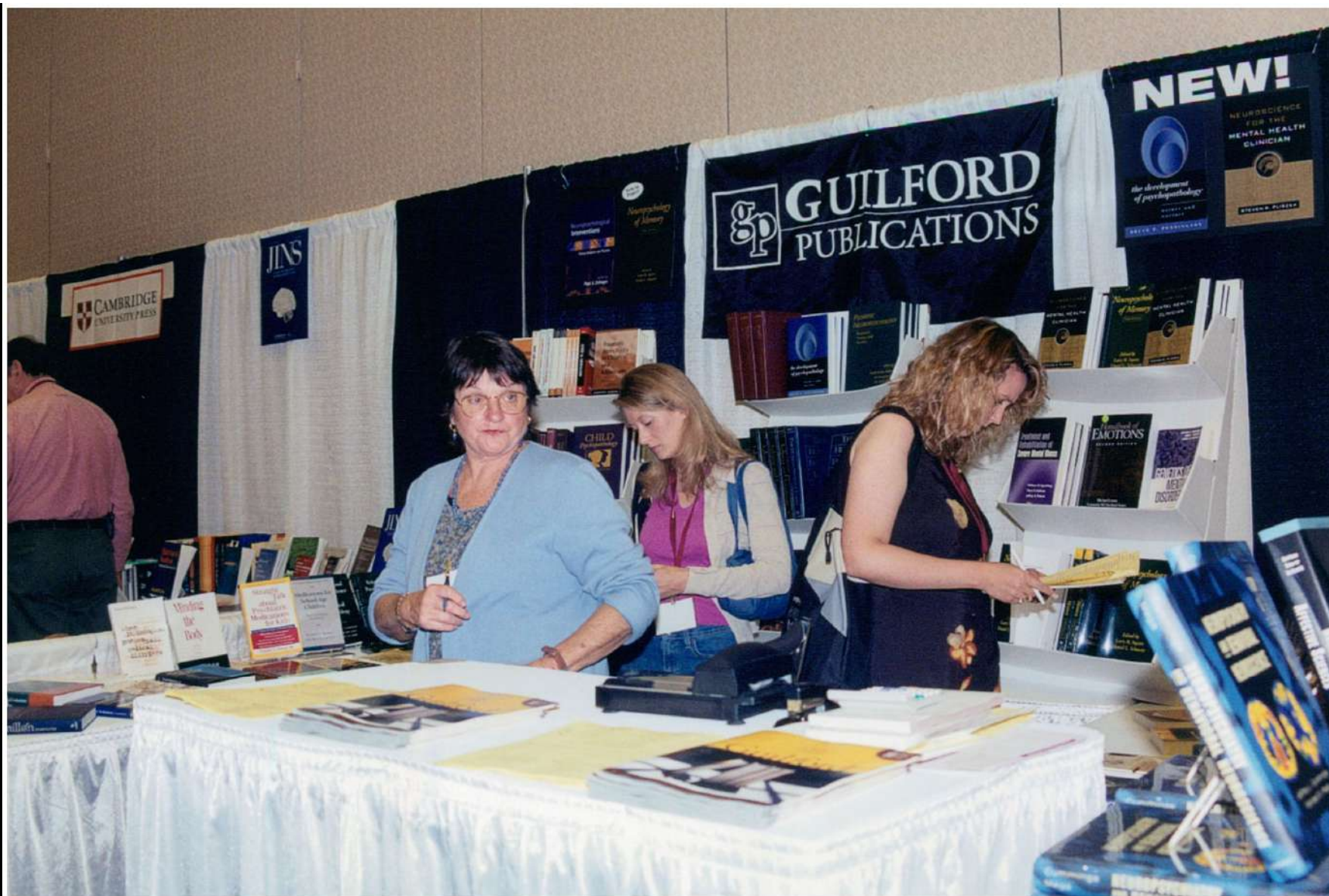








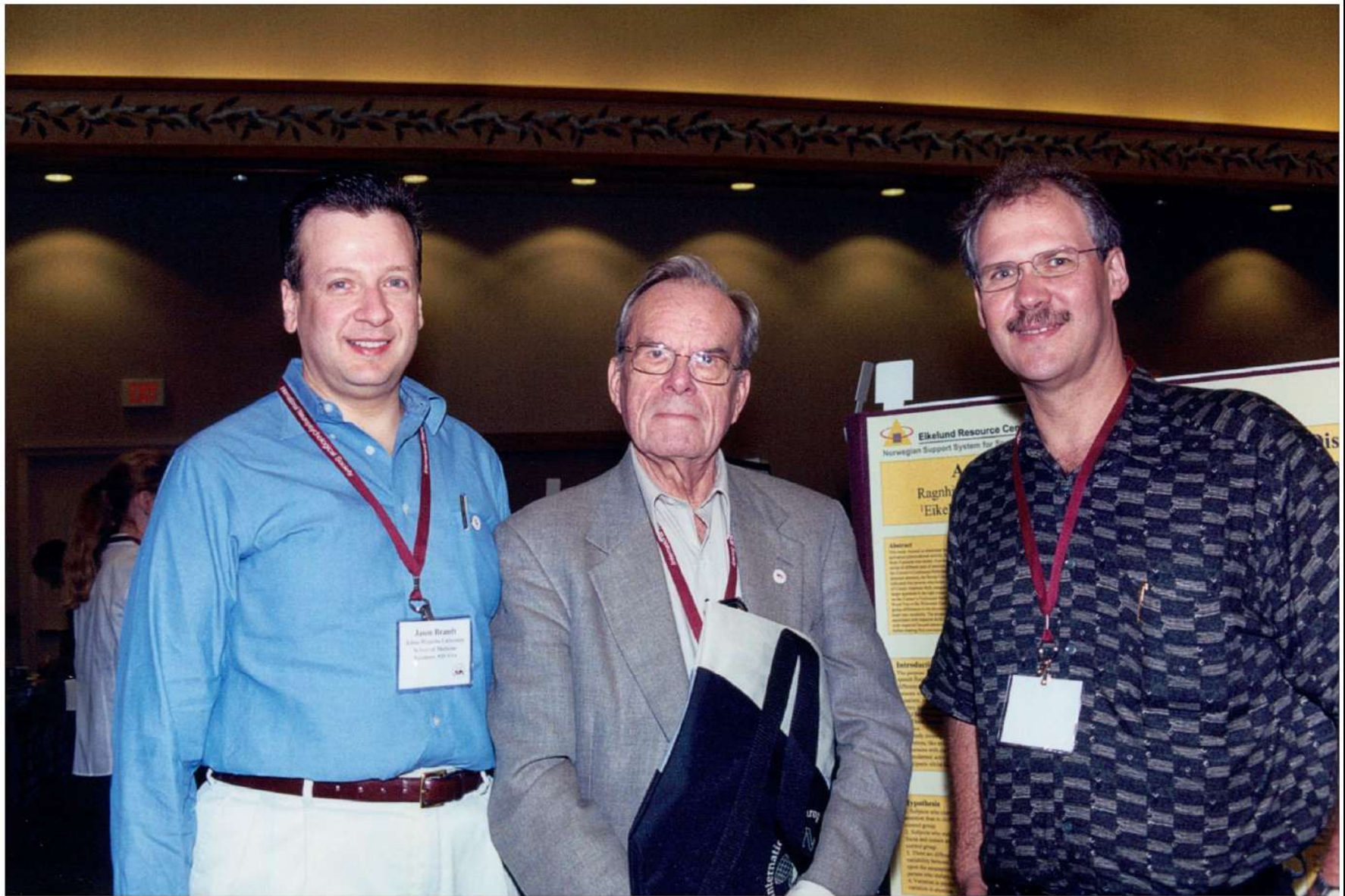












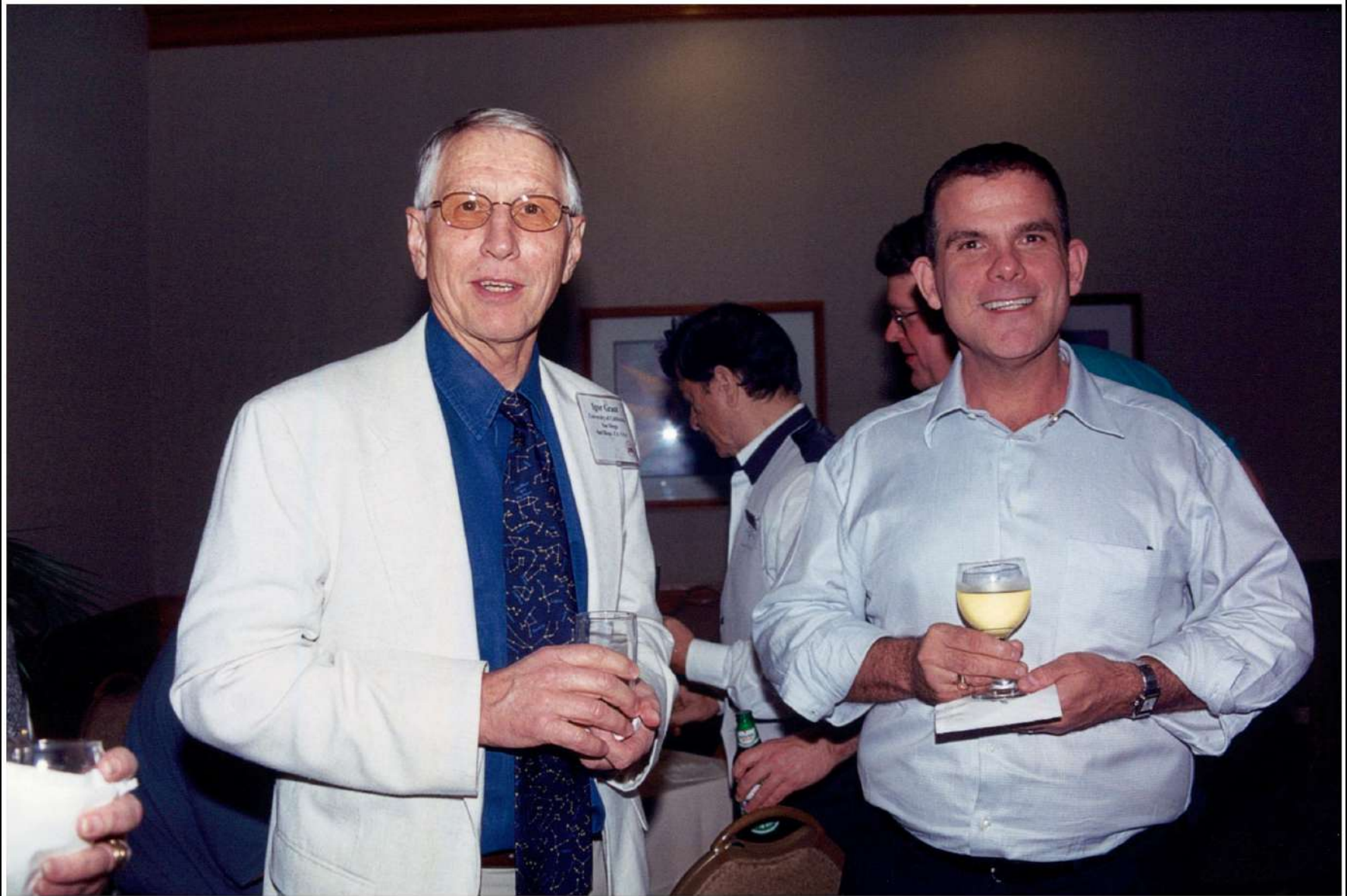




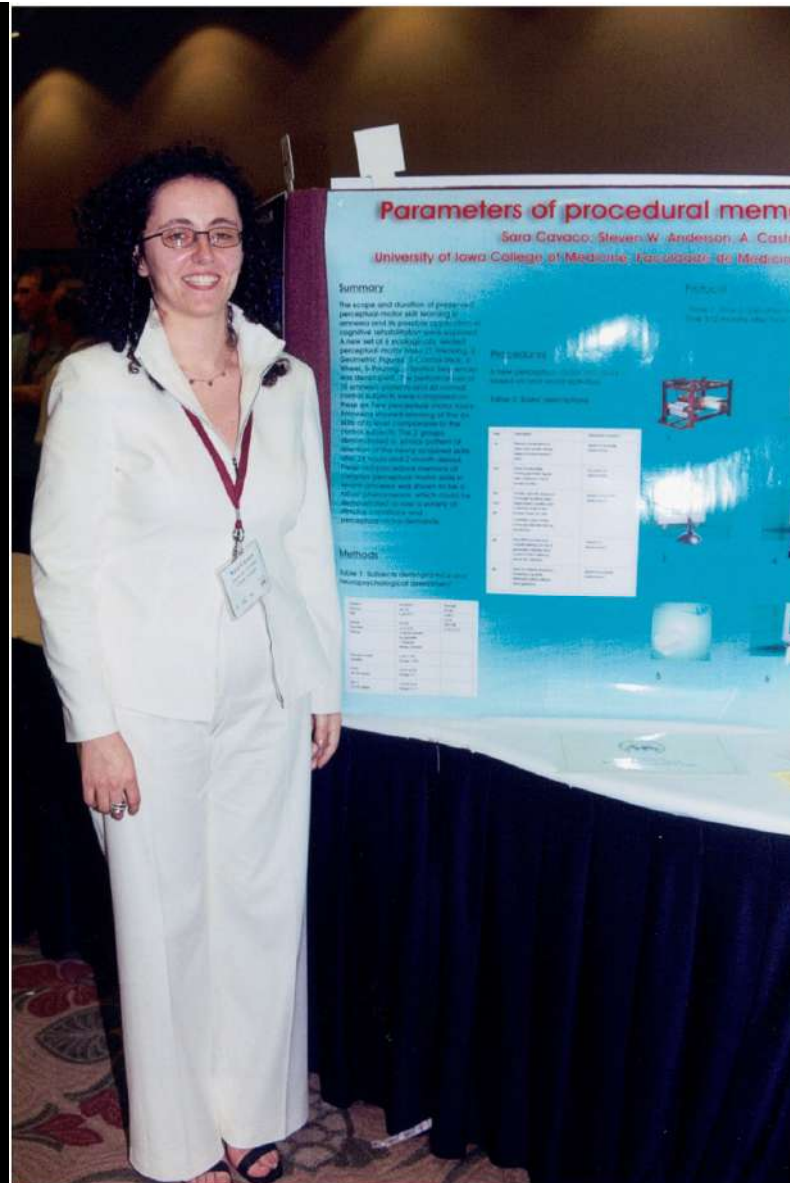














Parameters of procedural m

Sara Cavaco; Steven W. Anderson;
University of Iowa College of Medicine; Faculdade de

Summary

The scope and duration of preserved perceptual-motor skill learning in amnesia and its possible application in cognitive rehabilitation were explored. A new set of 6 ecologically related perceptual-motor tasks (1-Weaving, 2-Geometric Figures, 3-Spatial Sequence) was developed. The performances of amnesic patients and 40 normal control subjects were compared on these six new perceptual-motor tasks. Amnesics showed learning of the six tasks at a level comparable to the control subjects. The 2 groups demonstrated a similar pattern of retention of the newly acquired skills after 1 hour and 2 month delays. These results suggest that intact procedural memory of perceptual-motor skills in amnesia was shown to be a phenomenon, which could be studied across a variety of conditions and perceptual-motor demands.

Subjects demographics and psychological assessment

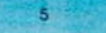
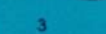
Demographic	Measure
Age (M)	24.00
Age (SD)	4.40
Gender (M/F)	20/20
Education (Years)	14.00
Intelligence (M)	100.00
Intelligence (SD)	15.00
Handedness (L/R)	20/0
Motor Speed (M)	100.00
Motor Speed (SD)	15.00

Procedures

A new perceptual-motor skill tasks based on real world activities.

Table 2: tasks' descriptions

Task	Description	Dependent measures
1	Weave a small piece of fabric from under string using an index finger's tip.	Speed of accurate performance
2	Trace 6 geometric shapes geometric figures with a ruler on a rough paper surface.	Accuracy of performance
3	Identify a specific sequence of 10 finger positions using a computer screen and a string of beads in the sequence (i.e. the sequence: 1-2-3-4-5-6-7-8-9-10).	Speed of accurate performance
4	Put 10 beads in order from 1 to 10 using a string of 10 beads (i.e. 1-2-3-4-5-6-7-8-9-10) and a string of 10 beads.	Speed of accurate performance
5	Learn an arbitrary sequence of 10 numbers (i.e. 1-2-3-4-5-6-7-8-9-10) and a string of 10 beads.	Speed of accurate performance













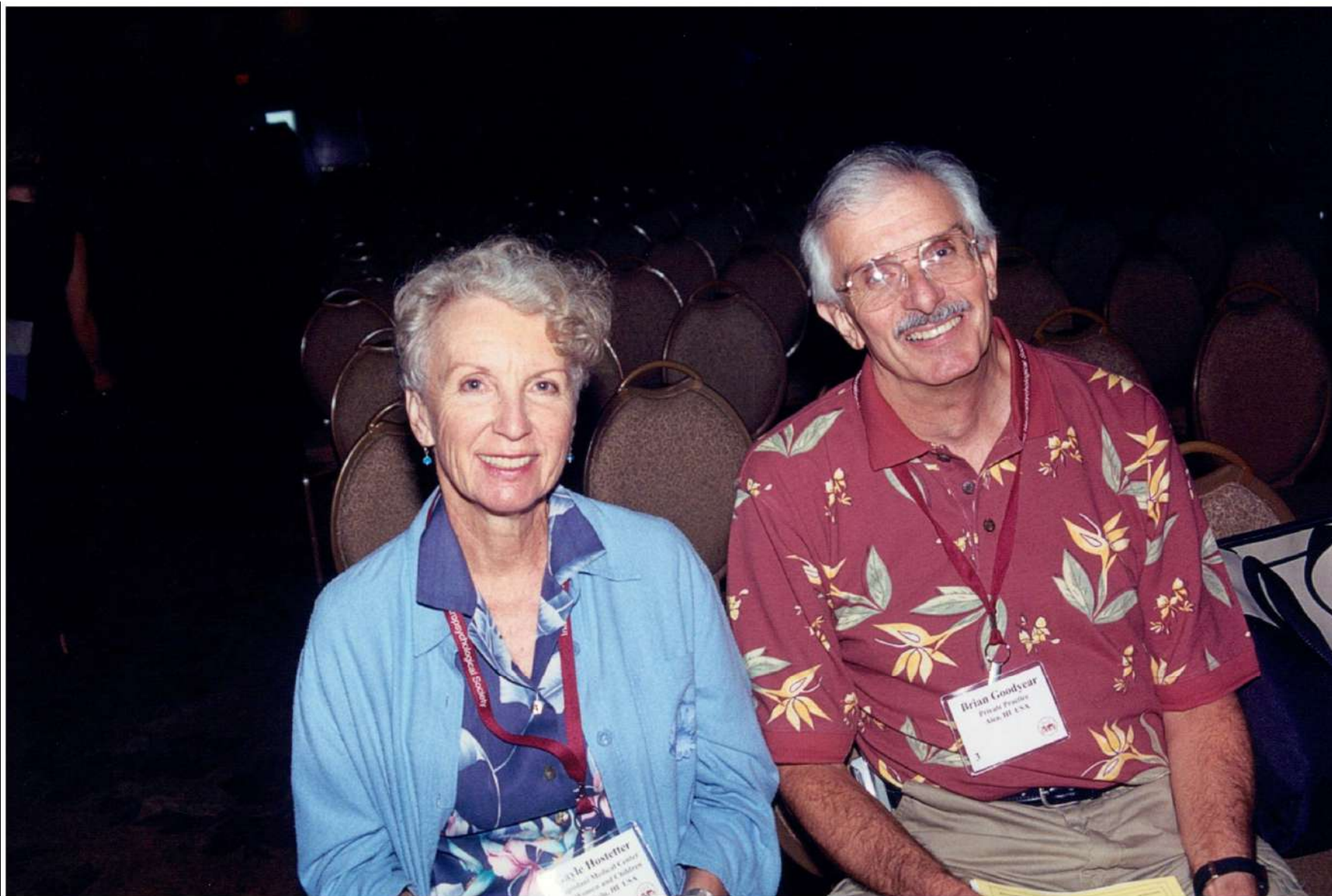








































Baltimore 2004







































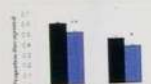






¹Brigham and Women's Hospital, ²Harvard Medical School, ³Harvard University

Recognition Results



- *Staphylococcus aureus* were called "old" many years after a successful time (late 19th century)
- Increased life and false reuptake following production (late 19th century)

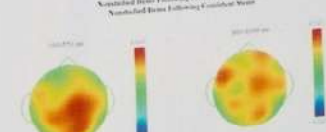
- Mutation of *SaHPI* not diagnostic of participant response within ensembles
- Latent processing (1200-1600 ms) correlates with response in setting of enhanced fluency following predictive stress
 - "None" responses more positive than "N/A" responses
 - *β*1 gamma present in frontal regions
- No late processing difference (1200-1600 ms) without enhancement of fluency following associated stress

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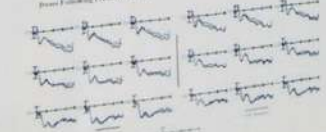
Study

4.2.2.2. *Following Productive Areas*



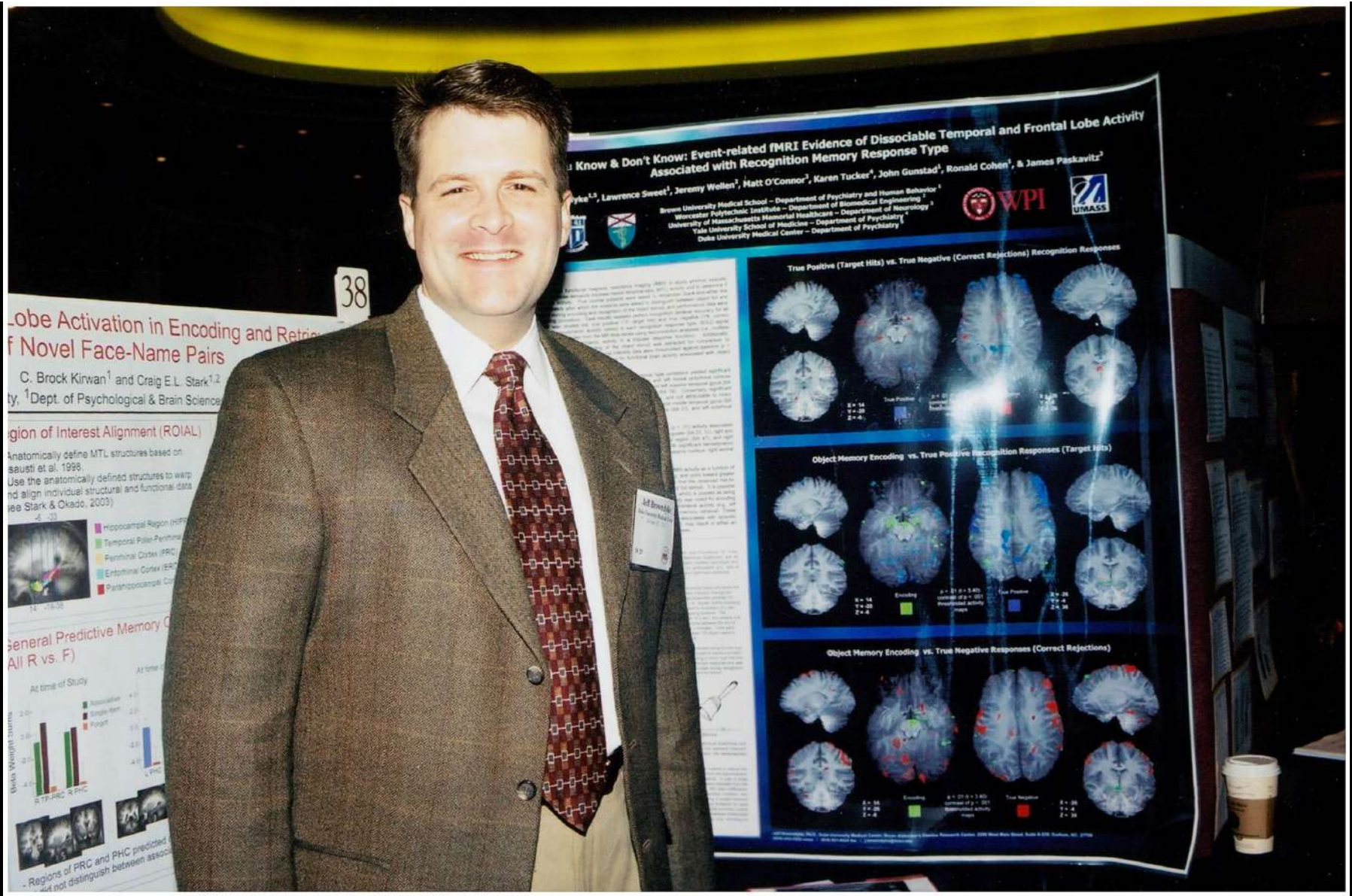
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- **External conceptual fluency**
 - * Discrete bits and later synthesis, representing
 - * Results in detailed representation of concepts
 - * Consistent with some sort of conceptual map
 - * Correspondence with linguistic analysis (e.g., ability to view of account information as g. "What")
 - * A level of semantic processing can follow
 - (1981), suggest automatic integration process
- **Internal conceptual fluency**
 - * Early processing in the integrated concept about accounting
 - * Processing has involved in acquisition of the processing
 - * Unmodified items appearing are produced by coding of enhanced features
 - * Processing differs based on exposure in the (2)
 - * Processing involves both analytical and synthetic which fluency was increased gradually over time
 - * This later processing may be involved in the





Know & Don't Know: Event-related fMRI Evidence of Dissociable Temporal and Frontal Lobe Activity Associated with Recognition Memory Response Type

Pyka^{1,2}, Lawrence Sweet¹, Jeremy Wellen³, Matt O'Connor², Karen Tucker⁴, John Gunstad⁵, Ronald Cohen⁶, & James Paskavitz²

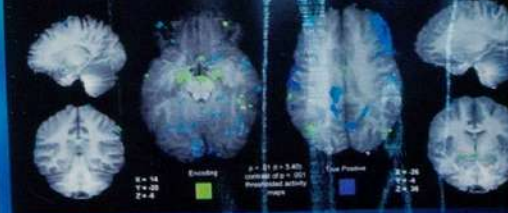
¹Brown University Medical School - Department of Psychiatry and Human Behavior
²Worcester Polytechnic Institute - Department of Biomedical Engineering
³Worcester Polytechnic Institute - Department of Neuroscience
⁴University of Massachusetts Memorial Healthcare - Department of Psychiatry
⁵Yale University School of Medicine - Department of Psychiatry
⁶Duke University Medical Center - Department of Psychiatry



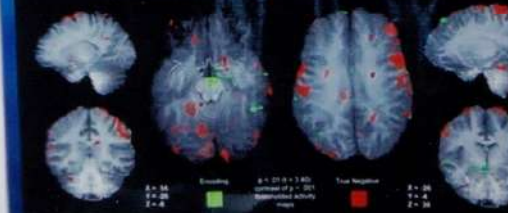
True Positive (Target Hits) vs. True Negative (Correct Rejections) Recognition Responses



Object Memory Encoding vs. True Positive Recognition Responses (Target Hits)



Object Memory Encoding vs. True Negative Responses (Correct Rejections)

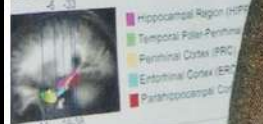


Lobe Activation in Encoding and Retrieval of Novel Face-Name Pairs

C. Brock Kirwan¹ and Craig E.L. Stark^{1,2}
¹Dept. of Psychological & Brain Sciences

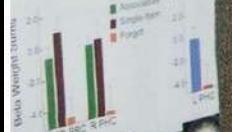
Region of Interest Alignment (ROIAL)

Anatomically define MTL structures based on sausti et al. 1998. Use the anatomically defined structures to warp and align individual structural and functional data (see Stark & Okado, 2003)



General Predictive Memory C...

All R vs. F









Polly Tasset
AS Registration
Hennepin, CO USA

Tiffany Tasset
Faculty of Health
Admission Division of Health
and Technology



























































































ad Effects
and SPM
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