

MIND'S EYE

Psychological Science

Missouri S&T | Spring 2018

DEE HAEMMERLIE
MONTGOMERY

A WOMAN OF
PURPOSE AND
PERSISTENCE

page 2





WHY DO WE LIKE WHAT WE LIKE?

NEW FACULTY **AMY BELFI** FINDS ANSWERS IN NEUROSCIENCE, MUSIC COGNITION, AESTHETICS AND EMOTIONS.

Amy Belfi, joined the psychological science department as assistant professor in 2017. She's passionate about understanding why people are moved by the arts — it drives her research, and the answers could be used in other domains, like music therapy for treatment of neurological and psychiatric disorders.

Belfi is a cognitive neuroscientist and multi-disciplined musician who studies brain-behavior relationships in humans.

"In my research," Belfi says, "I aim to answer questions like: Why do we like music? How does music influence our moods and emotions? Does music effectively trigger vivid memories?"

To answer these questions, she studies neurological patient populations with focal brain damage, uses neuroimaging methods to study the brains of healthy adults, records physiological responses like heart rate and respiration, and of course, performs behavioral studies to capture precisely how people respond to music.

"I've also done work on responses to other types of artwork, including paintings and poetry."

Belfi is the lead author of a study titled "Individual Ratings of Vividness Predict Aesthetic Appeal in Poetry," published in the 2017 journal *Psychology of Aesthetics, Creativity, and the Arts*. The study sought to answer the age-old question: "Why do we like what we like?" by gauging what we find aesthetically pleasing in poetry.

The study showed that vividness of mental imagery best predicted aesthetic appeal.

"While limited to poetry, this work sheds light onto which components most influence our aesthetic judgments," Belfi says.

As part of a 2017 research team commissioned by Spotify and Ford of Europe, Belfi studied the effects music has on our mood while driving.

"Across the board, music with a high level of energy left our testers feeling pumped up for the day ahead," Belfi says. "What was particularly intriguing was that far from having to be 'happy' songs, those most likely to have an uplifting effect could equally be brooding and melancholic. Of course, 'sad' songs can actually make us feel good about ourselves — they may remind us of difficult experiences we have overcome and learned from."

Belfi has co-authored 10 publications in peer-reviewed journals. She holds a Ph.D. in neuroscience from the University of Iowa and a bachelor of arts degree in psychology from St. Olaf College. Before joining S&T, she served as a postdoctoral associate at New York University.

Belfi teaches undergraduate courses in cognitive psychology and neuroscience.

"Belfi's expertise in cognitive neuroscience is a much-needed addition to the department," says **Susan Murray**, chair and professor of psychological science. "I am excited to see her continued research in understanding people's response to aesthetics and her interdisciplinary research in brain function."



MANY THANKS TO OUR DONORS

Your continued generosity to the Miner Phonathon helps us send students to a variety of professional conferences.

This year, we partially funded 10 students to attend the Society for Industrial-Organizational Psychology (SIOP) conference in April in Chicago. Nine students were first-time attendees.

The S&T team included:

- Graduate students **Alyssa De Santi** and **Debarati Majumdar** presented "Using AET to Explain Employee Reactions to and Ripple Effects of Supervisor CWB-O"
- Graduate student **Andrew Pepper** presented "Leader Discrimination and Organizational Response: Impacts on Trust and Attraction"
- **Elizabeth Short**, MS Psyc'17, presented "Gamers at Work: Predicting Workplace Relevant Behaviors Across Domains."

At the Midwestern Psychology Association's annual meeting, also in April in Chicago, **Sara Johnson**, a junior in psychological science, presented a poster on her work with **Amber Henslee** titled "Predictors of Freshmen Engineering Students' Report of Cheating." **Rhys Martin**, a junior in psychological science, gave a talk about his research with **Devin Burns**, assistant professor of psychology, regarding sequential effects in selective attention tasks. Several other students came to observe and learn.

GREETINGS FROM THE PSYCHOLOGICAL SCIENCE DEPARTMENT,

2017 was another banner year for the department. We continued to see growth in our undergraduate and graduate programs, added a new minor in psychology for healthcare — which is popular with students applying to medical school — and placed students in clinical, educational and business settings through our reestablished internship program

Senior **William Tolson** studied “improving employee satisfaction” among Rolla city employees. City administrator John Butz, was so impressed that he hired William to stay on after the internship.

Clair Kueny and I had an opportunity to visit Oman and review Missouri S&T’s cooperative program with Mazoon College. The school has offered one of the only undergraduate psychology degrees in Oman for over 20 years. The program’s graduates are making a significant difference in mental health and educational programs in the Middle East.

Our industrial/organizational psychology master’s degree will have its third graduating class this spring. **Amanda Mosier** received the Summer Graduate Research Fellowship (SGRF) in a campuswide competition. She is working with **Jessica Cundiff** to research the effects of experiencing benevolent sexism.

The department was very pleased to be ranked nationally in a survey conducted by the Society for Industrial and Organizational Psychology (SIOP). The study evaluated approximately 100 schools with master’s and Ph.D. programs in industrial and organizational (I-O) psychology. Our I-O master’s degree program tied for 16th



place in “Student Perceptions of Faculty Quality” and tied for 17th place in “Student Perceptions of Program Culture.” I am proud to be recognized for our faculty and our student-centered culture.

Dixie Finley, Psyc’68, a long-time supporter of the Miner football team, will be celebrating her Golden Alumni Reunion this year. Congratulations, Dixie. We look forward to welcoming you and other alumni when you return to S&T.

The last two years have been a period of great change for the psychological science department with numerous new faculty members joining us. I’ve spent 25 years at this university, and without hesitation, I can say my time in this department has been the most enjoyable. It was with great happiness that I accepted the position of department chair. I look forward to the continued growth of the department.

Warm Regards,

Susan Murray, Ph.D.
Professor and Chair,
Psychological Science

IN THIS ISSUE

2 **Dee Haemmerlie Montgomery: A woman of purpose and persistence**

During her nearly 40 years of teaching at S&T, Montgomery paved the way for women on campus to advance.

3 **Breaking the bias of STEM stereotypes**

Jessica Cundiff’s new book chapter examines gender roles and inequities in STEM fields and recommends how to stop the biases.

4 **2017–18 faculty accomplishments**

Our faculty are active in ongoing grant-funded research that often involves student participation.

5 **A life of service: at home and abroad**

Graduating senior Lydia Aiken hopes to use her S&T psychology education to start a career with the U.S. Foreign Service.

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Dee Haemmerlie Montgomery

A WOMAN OF PURPOSE AND PERSISTENCE

In her nearly 40 years on the Missouri S&T faculty, **Dee Haemmerlie Montgomery** taught over 230 psychology courses to over 6,200 students. But her impact reaches much farther.

Montgomery joined the S&T faculty in 1978 with a determination to help women succeed as students, faculty and in their chosen career pursuits.

"I knew that any group in society of less than 30 percent would be at a disadvantage, and faced with the shortage of women at S&T, I was determined to help them," Montgomery says.

Montgomery paved the way for women to advance on the S&T campus by achieving some powerful "firsts." Montgomery was the first tenured female faculty member in her department and the first woman at S&T to earn a Curators' title when she was selected as Curators' Distinguished Teaching Professor of psychology in 1994. Montgomery also was the lead donor for S&T's Woman Student of the Year Award.

Curious about human behavior and determined to help others build confidence, Montgomery researched the roles of women in society and found ways to get people to recognize and change maladaptive attitudes, feelings and behaviors. She studied gender differences in the academic

performance and retention of engineering majors, leadership traits in male student leaders as compared to female student leaders on a male-dominated campus and the association of internet usage with depressive behavior. Her research on social anxiety was published in several textbooks.

In addition to being an extraordinary educator who was recognized with numerous, top-level teaching awards, Montgomery is also known for mentoring students.

"Dr. Montgomery will forever be an inspiration to me," says **Katie M. Tucker**, Psyc'11. "She gave me the encouragement I needed to get through school when I lost my mother and struggled with my grades. She gave me a push forward and built my confidence by providing me the opportunity to work as a teaching assistant during that time."

Today Tucker, who works at S&T as a degree completion advisor, is making a difference by helping students who consider withdrawing from college. She advises them with the same respect and understanding she learned to emulate from Montgomery.

Throughout her career, Montgomery overcame obstacles associated with being a minority in higher education. Her accomplishments are many. She paved the way for female faculty and students at S&T to be recognized, she actively researched contemporary behavioral problems to help people solve them and made extraordinary contributions to teaching and learning.

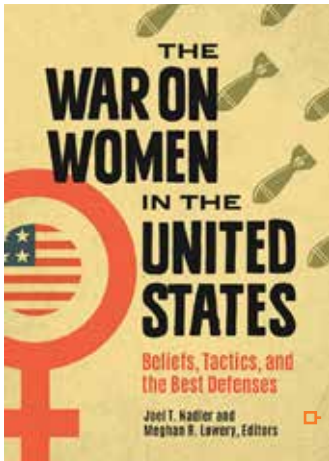
As dedicated supporters of S&T psychology students, Montgomery and her husband, **Robert Montgomery**, professor emeritus of psychology, annually contribute to three departmental scholarships.

"Dr. Montgomery will forever be an inspiration to me."

At S&T's Dec. 16, 2017 commencement ceremony, Montgomery's retirement was made official when S&T Provost **Robert Marley** conferred her with emerita status.

To have an impactful life, Montgomery believes it's essential for people to figure out who they are and what they enjoy doing and "stick with it."

"Pursue your dreams and passions... and be persistent," she says. "Because life may not always be easy or fair at a particular point in time!"



BREAKING THE BIAS OF STEM STEREOTYPES

According to **Jessica Cundiff**, assistant professor of psychological science at S&T, women who consider careers in the physical sciences, technology, engineering and math (STEM) fields are deterred by stereotypes that impose barriers on the recruitment, retention and advancement of women in STEM.

With women making up less than 25 percent of the STEM work force, there has been less progress over the years in STEM than for women working in other historically male-dominated fields such as business, law, medicine, and other areas of science such as biology and psychology. While it may seem that women are freely choosing to opt out of math-intensive STEM careers, Cundiff says these choices are constrained by implicit STEM-male stereotypes that may have been unconsciously ingrained since childhood.

Cundiff examines why these stereotypes exist and recommends how to remove them in “Subtle Barriers and Bias in STEM: How Stereotypes Constrain Women’s STEM Participation and Career Progress,” her chapter in the book released in February 2018, *The War on Women in the United States: Beliefs, Tactics and the Best Defenses*.

The book is a collection of 12 scholarly articles by different authors that examines gender roles and inequity and the impact of unintentional and purposeful efforts to undermine women’s equality in the U.S.

Cundiff suggests that educators and practitioners can help break these stereotypes and broaden the appeal of STEM by using diverse images to represent the fields and by adapting course projects to include communal goals, which are important to women. She recommends strategies for empowering women in STEM, such as focusing on growth over achievement, addressing concerns about belonging and using a “values-affirmation” writing activity where students reflect upon and affirm their core values to reinforce their self-worth and integrity.

“Even when bias is unconscious, that does not absolve us of responsibility.”

Cundiff says. “We have a responsibility to interrupt unconscious bias and minimize its effects on our behavior.”



JESSICA CUNDIFF
Assistant professor of psychological science



OUTSTANDING TEACHING AWARD

Congratulations to **Amber Henslee**, associate professor, and **Merilee A. Krueger**, associate teaching professor, who received the Outstanding Teaching Award for 2016–17.

The Outstanding Teaching Award committee presents the awards annually based on student evaluations. This year, 41 faculty campuswide received the award.

2018 S&T PSYCHOLOGY COLLOQUIUM SERIES

Now in its second year, the Psychology Colloquium Series assembles a diverse slate of presenters each semester that includes renowned faculty from other universities, research-active S&T faculty, soon-to-graduate master’s degree students in industrial-organizational psychology and undergraduate researchers.

Six presentations take place each year, and each has attracted audiences of students, faculty and staff from across campus and beyond. Recent presentations:

“Responding to Team-Member Initiative: Interpersonal Outcomes of Proactive Behavior,” presented by **Clair Kueny**.

“Adventures in Replication: How to ‘Prove’ a Null Effect,” presented by **Devin Burns**.

“The Moral Psychology of Killing in War,” presented in March by Hanne Watkins of the University of Pennsylvania.

The series is coordinated by **Daniel Shank**, assistant professor of psychological science and is financially supported by the Dean’s Leadership Council of the College of Arts, Sciences, and Business.



ALUMNAE COMBINE CBT RESEARCH AND CAMARADERIE

Missouri S&T alumnae **Mary Carey**, Psyc'17, **Cassie Vogt**, Psyc'14 and **Samantha Kempker**, Psyc'14, pictured above from left to right, presented their research at the 51st Annual Convention of the Association for Behavioral and Cognitive Therapies in November in San Diego.

Carey and **Amber Henslee**, presented posters titled "The 'morning after': the relation between drinking and risk-taking among college students" and "Risk-taking propensity among college students before, during and after an event-specific occasion." The posters were based on their work with **Matt Thimgan**, assistant professor of biological sciences, and undergraduate coauthors **Sophia Rodriguez**, of S&T and Kelly Ma of UCLA.

Vogt, a research assistant at Washington University School of Medicine in St. Louis who earned a master's degree in clinical psychology from Eastern Illinois University in 2017, presented her thesis research. She plans to pursue a Ph.D. in clinical psychology.

Kempker earned a master's degree in clinical psychology from Sam Houston University in 2016 and entered a doctoral program in clinical psychology at Ohio University in 2017.

As S&T undergraduates, Carey and Kempker were research assistants in Henslee's lab.



BABY WISPERER

Clair Kueny, assistant professor of psychological science, held the baby of an industrial/organizational psychology graduate student during the "Job Analysis and Performance Management" course so the mother could give her presentation to the class.

In a team effort, several students also enjoyed holding the baby during the evening class so the mother could participate in discussions between on-campus and distance students in the seminar classroom.

2017-18 FACULTY ACCOMPLISHMENTS

Denise Baker, assistant professor of psychological science, participated in an NSF-funded interdisciplinary research team to improve the knowledge decision-makers and citizens need to impact water resources.

Baker also directed the formation of S&T's new Design, Language and User Experience Laboratory to help students better understand how people perceive and process information through web, gaming and various software platforms. In addition, she is researching human interaction with smart appliances and energy management systems in a study at S&T's Solar Village.

Devin Burns and **S.N. Balakrishnan**, Curators' Distinguished Professor of mechanical and aerospace engineering, received an S&T grant to study "Quantum Modeling of Decision Making in Smart Living."

Clair Kueny, assistant professor of psychological science, is continuing her research on interpersonal workplace behaviors with a grant titled, "Team Processes and Emergent States."

Susan Murray, chair and professor of psychological science, and Yinfu Ma, Curators' Distinguished Teaching professor of chemistry and associate dean of research in the College of Arts, Sciences, and Business, presented a forum sponsored by the Center for Advancing Faculty (CAFÉ) on finding a mentor for all S&T pre-tenure and early career faculty.

Daniel Shank, assistant professor of psychological science, received a research grant titled, "Effective Impressions of Groups versus Individuals."

Nancy J. Stone had a new textbook published this fall, *Introduction to Human Factors: Applying Psychology to Design*, a comprehensive text that introduces students to human factors and ergonomics. Co-authors were **Alex Chaparro**, **Joseph R. Keebler**, **Barbara S. Chaparro** and **Daniel S. McConnell**.

Nathan Weidner, assistant professor of psychological science, led a research team that found that World of Warcraft gamers who were successful working as a team in "raids" had qualities that psychological studies have shown to translate to success on virtual workplace teams.



A LIFE OF
SERVICE,

AT HOME AND ABROAD

Lydia Aiken has had a longtime interest in other cultures and compassion for people from different backgrounds. And when she graduates from Missouri S&T, she hopes to carry that compassion and understanding into a career with the U.S. Foreign Service.

The U.S. Foreign Service's 15,000 professionals carry out the foreign policy of the United States and aid U.S. citizens abroad.

Aiken, a senior in psychology with an emphasis in leadership, says that Missouri S&T has prepared her well for her post-college life and career.

This past July, she participated in a two-week study abroad trip to Nicaragua. During the trip, Aiken took immersive Spanish language lessons from Nicaraguan instructors and listened to guest lectures by local experts on Nicaraguan culture, history and technology. She even helped

build a cooking oven for the local community. The trip was a requirement for Aiken's global studies minor.

"If I can get on Facebook and chat with somebody that's on the other side of the world, shouldn't I know something about them and their culture?" Aiken says.

For her capstone course, Aiken took Cross-Cultural Psychology with **Merilee Krueger**, associate teaching professor of psychological science. The course reinforced Aiken's long-held belief that just because some people are different than you, it doesn't mean you should fear them.

"My mom always said that I had no fear of people who were different," Aiken says. "Your differences make you unique, so we should always try to learn those first."

Aiken realizes that the world is getting smaller, and wants to do her part to make it a more peaceful and understanding place.

"I hope that sharing my experience will encourage more students to study abroad."

"We are an increasingly global society," she says. "I hope that sharing my experience will encourage more students to study abroad."



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