STATE OF THE DEPARTMENT FROM OUR BRAND NEW CHAIR

Our new Psychology Chair, Dr. Elise Labbé, needs no introduction. She has been with us since 1986 (BA from Loyola U of New Orleans, MA & PhD from Louisiana State U). Since that time she has been a most valuable member of our clinical program and worked hard with other faculty members to implement our Clinical & Counseling Psychology (CCP) Doctoral Program a few years back. Now as Chair of the entire department, she is focusing on further developing our Brain & Behavioral Sciences (BBS) Program (formerly “Experimental” Program).

Our previous chair Dr. Larry Christensen (now retired) initiated a self-study process for our BBS Program, and Elise has inherited this job. All university departments must undergo this process every 10 years. Dr. Christensen invited a consultant to help in the assessment (Dr. Michael Stoloff, Chair of Psychology at James Madison U in Virginia). He basically gave us a glowing review, but with a few comments as usual. One suggestion was that, since many Psychology programs lose students during the freshman and sophomore years, we could benefit immensely from having one or two faculty members teach Introduction to Psychology in large sections. One or two regular faculty members who are passionate about their field and enthusiastic could inspire incoming students to stick with psychology as a major. Also a certain amount of charisma in the teaching professor would help, along with a field of interest based more or less on real-world behavior. Dr. Josh Foster is someone who would be a good candidate for this new kind of PSY 120, since his research area of Social Psychology is of intrinsic interest to most students. He also loves to chat with students face-to-face, and likes to discuss with them both philosophical (“What exactly is Psychology?”) and more tangible (“What are the job prospects in Psychology?”) issues in Psychology.

Elise still finds time for clinical research. Her Mindfulness Based Intervention Program, even with only 1-2 interventions, still proves emotionally energizing for traumatized patients and fatigued caretakers. She has several students gathering data at the Alabama Institute for Deaf & Blind, directing individual and group Stress Management Therapy sessions. Paige Naylor (MS) leads and coordinates these services at AIDB. Shane Kuhlman & Stephani Granato (MS) also provide group therapy at AIDB. She also has students providing psychological services and conducting research at Mitchell Cancer Institute, Paige Naylor (MS), Alyna Chambers (MS), Stephani Granato (MS) and Katie Russ (MS).

USA Foundation Once Again Provides Support for CCP Doctoral Program

This year the prestigious 2015-2016 USAF Fellowships for our CCP doctoral students go to: Katie Russ, Stephen Aita, Nathan Booth, Timothy Carroll, Brook Sims & Jessica VanOrmer.

CONGRATULATIONS TO ALL 6! MANY THANKS to the USAF!

Summertime Sprint on Springer Mountain

Last summer Elise & husband Bruce hiked the Appalachian Trail, or at least 40 miles of it. They started at Springer Mountain GA and were at it for 3 whole days. First they discovered that there was no running water in any of the shelters. Then Elise started to get sore feet, but a Good Samaritan on the trail retied her boots for her (with a heel-lock tie) and she was newly energized and good for the rest of the hike. Luckily the weather was absolutely great, being nice and cool up high in the mountains, and get this: No rain the whole time!
Dr. Laura Powell, our full-time teaching professor, is collaborating with Dr. Chuck Brown on an extensive RESEARCH PROJECT to more fully e-engage students in the e-120 Introductory Psych course. The textbook for this course is totally on-line and gives students very detailed feedback about how they compare with other students in the same class. Here are some new twists, presented by Laura & Chuck at the Society for the Teaching of Psychology’s Annual Conference in October 2015:

Demographic data (e.g. gender, ethnic background, socio-economic status) are being examined to determine these effects on student engagement (see below graphs). Asian students had the highest eBook engagement times, but due to the sample size, and variability within ethnic groups there were no significant differences between reading time and ethnic classification. No gender differences were observed. BBS student Robert Faulk will explore difference between STEM and non-STEM majors for his first year project.

Learning Community students are also being compared to students not enrolled in a learning community. Learning Communities pair an introductory class (e.g. Intro Psychology) with a section of Freshman Seminar (which teaches how to study, succeed in college, etc). Comparing the grades of the two groups of students will determine the effectiveness of the Learning Community.

More metacognitive skills are being assessed and added to the teaching agenda, so students will be asked things like: “In my field of study I can easily distinguish between relevant and irrelevant information.” OR “I can explain to the general public the relevance of my field for scientific, technical, and social debates.” These questions are from Chuck’s 21st Century Skills Inventory, which will be used in a first year project by BBC student Jennifer Brantley.

LEARNING with SNIFFY: Laura also teaches Psychology of Learning, so I asked her if she incorporated any animal work therein. YES! To teach operant conditioning she uses SNIFFY THE VIRTUAL RAT, whose popularity took off when Psychology did away with real-world rat labs. Apparently SNIFFY does truly incorporate the true rat personality, because the hardest job for students to master is the shaping process. Once s(he) learns to press the bar for food, the schedules of
reinforcement take over and s(he) is pretty automatic from then on.

FAMILY NEWS: Laura’s husband Don is Operations Engineer at the Highway Department and their biggest project is designing and building the new I-10 bridge.

Good News for all faculty commuting from Baldwin County!

Daughter Anya (age 10, Grade 5) is now as tall as Laura and into volleyball, dance (ballet, jazz, hip-hop), as well as more scholarly pursuits such as marine mammal biology and physics (she thinks a lot about force & friction). Son Konrad (age 4) can already write his name AND the first 5 letters of the alphabet [ABCDE], and working on the rest in his spare time when he is not busy with dinosaurs or superheroes.
Promoting Integrated Care and Mental Health

Dr. Jennifer Langhinrichsen-Rohling is at the peak of her extensive, far-reaching Deepwater Horizon grant (obtained 4 years ago as a result of the BP Oil Spill Medical settlement). It focuses on treating residents of the two Lower AL counties who may have experienced stress resulting from the spill itself, as well as other forms of stress (e.g. family, financial) resulting from living conditions along the Gulf Coast. Jenny emphasizes that when disasters occur within the community, it is necessary to have “a community response to trauma” available within the healthcare system so folks can receive treatment quickly and efficiently. The best way to accomplish this is to ENGAGE/ESTABLISH/EMBED in an ENDURING manner specific Behavioral Health Programs within existing medical and educational systems. She stresses that BEHAVIORAL and PHYSICAL health are interactive in nature, and improving both simultaneously is the best way to foster resiliency in the community at large.

THE TEAM currently includes a Director of Clinical Interventions, a Director of Training & Evaluation, a Project Operation Manager, a secretary, and numerous behavioral health providers servicing Mobile and Baldwin Counties, 4 Psych grad students (Selena Jackson, Caitlin Anderson, Shannon Boone, and Mallory Schneider), 3 Psych undergrads (Eric Smith, Malaya Richard, & Keagan Smith) 1 intern (Peyton Williams), and 1 professor on sabbatical from Samford (Jonathan Davis). The center promotes numerous collaborations including: The USA Emerging Scholars Program in partnership with Dr. Ishara Ramkisson and USA Department of Speech Pathology & Audiology, Tulane University, and Dauphin Island Sea Lab; a High School Occupational Health & Safety Training Program in partnership with the Mobile Area Education Foundation and the Mobile County Public School System. This later program is funded by the National Academies of Science. Notable accomplishments of THE TEAM include:

1. Across the past year, therapeutic services were provided to over 2,000 patients receiving healthcare at one of the areas Federally Qualified Health Care Centers.
2. Three Child Psychiatry Fellows, supported by the center, began providing services within high-need schools within Mobile County as part of an effort to facilitate coordinated school care.
3. New primary care systems were added. As of January, the center is supporting a Behavioral Health Provider (Mary Smith, LGSW) to work in the USA Family Medicine Clinic as part of their integrated health care team.
4. A former intern fluent in Spanish (Stephen Schottgen, LGSW) was hired full-time to provide integrated services in Foley, AL in order to work with their large Hispanic population.
5. A chapter on the Nuts & Bolts of Promoting Integrated Health was co-authored by THE TEAM and published in Nov 2015.
6. Lots of TEAM grads and undergrads received recognition. Candice Selwyn was honored as Grad Student of the Year. Selena Jackson was voted as the Runner-Up in the university-wide 3 min thesis competition. Kali Thompson was chosen to give an oral presentation of her honors thesis to the greater university community. At this event, Kali was awarded a Psi Chi award for her scientific and academic accomplishments.
7. Youth Mental Health First Aid Trainings took place to provide certification to teachers, staff, and administrators for high-need schools within Mobile County and for all schools in Baldwin County.
8. Two Train the Trainers events (each 40 h long) for general Mental Health First Aid (MHFA) and Youth MHFA were held for professionals from three states: AL, FL & MS. Each week-long event trained 27 MHFA instructors. These instructors are now certified to train community members to handle mental health crises and promote the reduction of stigma surrounding mental health needs.
9. The Center brought in a nationally recognized expert to train 25 local law enforcement officers in the Crisis Intervention Team model. After completing the 40 hour training, these law enforcement officers will be uniquely equipped to respond to situations in which mental health conditions are a factor; hopefully reducing some of the dangers associated with these calls. Continuous training in CIT will now be a part of the local law enforcement training.

Selena Jackson, USA grad student in the CCP Program, presents her findings at the International Society of Traumatic Stress Society.
Kali Thompson presents findings from her UCUR research project.

MEANWHILE BACK AT THE JLR LAB......

Jenny is also focusing on disasters closer to home, such as working with families disrupted by the **Christmas 2012 tornado** that hit Murphy High School here in Mobile. Luckily, no one was in the building at the time, but – nevertheless - affected families obviously became very **stressed out** due to the loss of the school 🏫. Jenny’s disaster research protocol includes bringing a family “into the lab” (which looks similar to a living room) where the family completes three tasks together, one of which is to “plan a meal” to simulate how family consensus is made. Conversations are recorded and, after much transcription, data is analyzed as to what kind of issues develop when family members must make decisions together or talk about stressful events with one another. Interestingly, in this initial phase of data analysis, parents rated themselves as more negatively affected by this disaster than the teenagers themselves. Other on-going studies on **intimate partner violence** and **stalking** are proceeding nicely!

Eric Smith, USA undergrad, presents findings generated from his thematic coding of family discussions of how the 2012 Christmas tornado impacted them.

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Train the Parents!

Dr. Kim Zlomke (Psychology Clinic Director) is very busy with her 5 Doctoral students (Emily Corley, Garet Edwards, Rachel Hoadley, Noelle Vann, Jessica VanOrmer) in her major project that focuses on treating behavioral problems in kids, whether they be disruptive, autistic, or experiencing other kinds of developmental delays. Her intervention therapy lasts for 14 weeks, for which the parents are paid $100, and then is followed up 6 weeks later to determine success over time. But GET THIS! The intriguing feature of Kim’s program is that the **parents themselves are being trained in how to handle their kids!**

They are being taught how to say “NO” gently but firmly. They are learning how to give **timeouts** for disruptive behaviors***. For kids with autism who may have speech problems, they are learning how to repeat utterances slowly, clearly and with lots of emphasis. Kim and her team just published the **first paper on Parent Child Interaction Therapy** for kids with autism in *Child and Family Behavior Therapy*!

At this point I asked Kim “What exactly is the definition of autism?” “OMIGOD!” she lamented, “There really is no clear definition, it’s too multidimensional!” Some kids never even reach the speech state, others do reach it, phonetically and grammatically, but not socially. For example, they never learn “how to tell a story”. The therapy program is being conducted in collaboration with Dr. Brenda Beverly of the Department of Speech Pathology & Audiology. To quantify results, students keep count of basic words or conversational terms the kids learn. But Kim admits that her most **FULFILLING MOMENTS** come from more qualitative results, such as the parent announcing after completion of the program: “For the first time ever, I feel comfortable taking my child to the beach for a family vacation!” or “We got a baby-sitter for the first time ever!” At present Kim’s team is working intensively with 14 families. They are constantly developing new techniques that work (in the lab), but the ultimate goal is to get the techniques out into the community.

Kim has also started some projects with various USA Pediatric outpatient specialty clinics to provide consultation for child patients with medical problems. To this end she has received a 30K grant from the USA Health Service Foundation, which approached her and asked her **Please... Send some students!**

*** From JMS: To the best of my knowledge, the concept of **TIMEOUT** for behavioral modification was first developed by animal psychoacoustic researchers back in the 60’s, when the
field was doing away with shock avoidance and developing positive (food-based) reinforcement procedures as an alternative. While working in a signal detection experiment, if an animal made a false alarm (e.g. reporting a stimulus change when there was none) or a miss (e.g. failing to report a stimulus change when there was one), the chamber lights extinguished for a few seconds, and the animal could not begin work again until the lights came back on. This was punishment enough to keep the animal working happily and reliably. How wonderful that the fields of Comparative and Developmental Psychology share these useful concepts and hopefully there will be more to come in the future!

**Spelling Ability Influences How We Read**

Dr. Mark Yates of our BBS faculty thinks a lot about sound neighborhoods and how they relate to reading and spelling ability. Consider the word BAT. Now change the first sound “B” and see how many new words you can form (e.g. CAT/FAT/HAT/MAT/PAT/RAT/SAT/CHAT). Lots of word-sound neighbors here. Change the second sound (e.g. BET) or third sound (e.g. BAD) and get even more neighbors. Eventually you get the word’s entire sound neighborhood. Now consider the word CRIB that has only two sound neighbors: CRAB & CRICK. Sound neighborhoods have a very definite quantifiable psychological reality.

Mark measures this via his lexical decision-RT task, which presents letter-stimuli and measures the RT to decide if the stimulus is word or not. A classic result is that words with many sound neighbors result in faster RTs than words with fewer neighbors.

Mark has also found that the number of word positions that can be changed to form a neighbor is important. When neighbors can be formed across all three positions (e.g. DISH, where neighbors can be formed across all three positions: FISH / DASH / DILL) people recognize it more rapidly than for a word where neighbors can only be formed across two positions (e.g. CHILL doesn’t have any neighbor that shares the vowel).

Words with neighbors across three positions are $P = 3$ words, whereas words with neighbors across only two positions are $P = 2$ words. The RT difference between these two types of words is known as the spread effect.

AND it turns out that spelling ability interacts with the spread effect.

Mark measures spelling in a couple of ways:

1. One way is to evaluate whether participants can correctly identify it when a word is spelled correctly (spelling recognition).
2. The other way is to measure whether participants can correctly spell a word that is dictated to them (spelling production).

He finds that sound neighbors have the largest influence when spelling production is low and spelling recognition is high (see Fig 1 and Fig 2).

**FIG 1. LOW spelling production (-2) = BIG P2 vs P3 effect.**

**FIG 2. HIGH spelling recognition >1) = BIG P2 vs P3 effect.**

So the upshot of all this is that sound neighborhoods are not just abstract concepts that cognitive psychologists play with! The future goal is to determine why word neighborhoods are
accessed differently in individuals with different spelling abilities, and how to use this information to improve student reading and spelling ability. Mark will continue to collaborate in this research area with Dr. Tim Slattery, who left us last year for a new job in England, where the grass was apparently greener for eye-tracking research.

Family News: Mark’s daughter Chloe (age 10) loves being around small children and already looks forward to a future career as an elementary school teacher. Son Quinn (age 4) is, like most kids his age, heavily into STARWARS.

Wrestling with SUMO

Upon entering Dr. Ben Hill’s office, I noticed there was no desk. But he does have a very comfy lounge area set up in back, where he sat me. And YES he said, pointing to a counter-like shelf against a wall, he does have a desk, but it is a STAND-UP DESK. Ben says he concentrates better when he is standing up, and furthermore he thinks it might actually be unhealthy for humans to sit, because it is NOT part of our evolutionary heritage. (Other primates, as well as some early human societies, do not sit, in fact they squat when resting.)

With this bit of Evolutionary Bio-Psychology discussion out of the way, we began to talk in earnest about Ben’s newest research program SUMO: STUDY to UNDERSTAND META-INFLAMMATION & OBESITY.

SUMO is being conducted in collaboration with Dr. Diego Alvarez at the USA Medical School, Dr. Jett in Psychology, and other colleagues. Recently as part of SUMO, Ben et al. examined a Medicaid database with 240,000 patients and codes for obesity, cardiovascular disease, etc. Then, at the more nitty-gritty physiological level, they looked at whether some patients also had a code for positive C-reactive protein an indicator of inflammation. They hope to determine if OBESITY directly causes cardiovascular disease or whether inflammation is the main issue. A main point of the study is the calculation of the cost of treating inflammation. And there is a role for BEHAVIOR in this project too! Ben analyzes performance in various cognitive tests, measuring both means and variability, and (interestingly) the latter turns out to be a more sensitive measure for cognitive impairment than the former. Ben says "A healthy CNS will have a more consistent output in cognitive testing than a stressed CNS."

And GET THIS: The project, with major help from our new Visiting Professor Dr. Stephanie Jett, has incorporated an ANIMAL MODEL into SUMO! (See below for more detail on how Stephanie’s expertise in COMPARATIVE PSYCHOLOGY is contributing to SUMO.)

Ben also works on his NEED FOR COGNITION project with Dr. Foster to study differences between CRYSTALIZED vs FLUID intelligence. CRYSTALIZED is what you have if you like to watch the History Channel as opposed to soap operas. But FLUID is what you have if you like more novel problem solving activities that require a high degree of COGNITIVE EFFORT.

[I asked Ben if playing SPIDER SOLITAIRE LEVEL 3 on the computer was an example of a need for cognition. He doesn't indulge in this pastime but thought it would be associated with need for cognition. This is of particular interest for me as I play this game quite a bit.]

Ben also is collaboration with Dr. Martino in USA Neurosurgery on a grant from the NCAA on changing the culture of athletic teams regarding reporting concussions. Part of this involves having athletes watch educational videos and getting baseline data prior to the start of the athletic season. These results are then used to make return to play decisions.

Ben is also collaborating with Dr. Tara Davis in the Speech Department to look at Event Related Potentials after Traumatic Brain Injury. They have found that patients who recovered well from TBIs tend to use the front part of their brain more during semantic testing, while health normal individuals and individuals with poor recovery from TBI use more posterior areas. This could mean that the brain of TBI patients who recover better has actually changed to recruit more healthy cortex as a recovery mechanism.

A tidbit on Tidbit. Ben’s 15-year-old cat Tidbit has recovered from his neurological trauma suffered a few years ago (incorrectly diagnosed by the vet as a brain tumor, but CORRECTLY diagnosed by Ben as a stroke). Ben knows now for sure that Tidbit is OK because “he sleeps in the normal position” seen below.
Dr. Stephanie Jett (Our new Visiting Professor with 5 courses to teach) has also found time to start a Comparative Psychology project, in collaboration with the USA Medical School and our very own Dr. Ben Hill (see above). YES Stephanie is developing a behavioral-cognitive animal model for the SUMO project! YES there are obese and diabetic MICE! YES mice can experience physical and psychological stress! YES mice also develop the C-reactive protein in response to pathological stress! And YES mice are the very first participants to test the protein inhibitor being developed by the Medical School to treat these various pathologies!

Stephanie is managing the behavioral-cognitive part of the MOUSE-SUMO project. She has devised an apparatus that requires a mouse to learn to poke its head into a particular PVC tube to obtain food. With this animal model, all sorts of relevant questions can now be asked: Will there be cognitive differences between normal and pathologically stressed mice? Will the protein inhibitor help the stressed mice to learn? Stephanie has also incorporated Ben’s (human) variability measures into the project to test for consistent output on the mouse test battery. So far, one common finding appears in both man and mouse: Normal CNSs have more consistent output than pathological CNSs.

Stephanie has not given up her work on the higher forms of animal life. She has gathered much data from her graduate days at USA (she was JMS’s last Masters student back in 2010) and USM. She has data on identification of stuffed animal objects by parrots and spatial memory in monkeys (Mobile Zoo in Wilmer), spatial memory in dogs (Gulfport Humane Society), and visual causality processing in vultures (Mobile Environmental Center). Her NEW YEARS RESOLUTION is to write it all up…….

Dr. Joan Sinnott (JMS, Comparative Psych Professor Emerita, retired from USA in 2013) now works in the REAL ANIMAL WORLD of the UTICA NY ZOO. (Sort of like JLR working in the REAL HUMAN WORLD of the AL GULF COAST COMMUNITY.) Last year we trained JOEY (a female African Crested Porcupine) on a 20-trial go-left/go-right reversal test, where JOEY must change her directional response on Trial 11 to get her food treat. We gave her an auditory cue by changing the name of the PERSON-STIMULUS she must approach to get her food. JOEY NOW LISTENS TO THE PEOPLE-NAME-CHANGE! Joey is now doing so well that we are now bringing in zoo visitors to be PEOPLE-STIMULI.

After hearing “ERIN”, JOEY goes LEFT towards ZOOKEEPER ERIN (in blue). ERIN has a bit of sweet potato ready to deliver to JOEY, but will not feed her until she gets all the way to the end of the fence and JMS (in white) says “GOOD!”

After hearing “LEAH”, JOEY reverses her response and now goes RIGHT to ZOO VISITOR LEAH (in red).

We tested Joey for 30 sessions, giving her the auditory (PEOPLE-NAME) cue on each of the 20 trials. The figure below shows how her performance on Trial 11 (where...
the reversal occurs) improved through sessions 1-10/11-20/21-30. From 40% to 60% to 80% CORRECT! (Chance performance on a 2-choice test = 50%, and 75% is considered evidence of learning).

"Now I know how Kim Z feels when those kids with autism get things RIGHT!!"

This newsletter gets by with a little help from JMS