ARMADILLO

The Association for Research in Memory, Attention, Decision-making, Imaging, Language, Learning, and Organization

University of Texas at El Paso
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DAY 1 — FRIDAY OCTOBER 10, 2025

TALKS

Session 1

9:00 AM — Talk 1

A Multidimensional Approach to Understanding Caregiver–Infant Communication

Jessica E. Kosie, & Casey Lew-Williams

Arizona State University

Everyday caregiver–infant interactions are dynamic and multidimensional. However, existing research underestimates the true dimensionality of infants' experiences, often focusing on one or two communicative signals (e.g., speech alone, or speech and gesture together). The present study investigates *infant-directed communication (IDC)*—the suite of communicative signals from caregivers to infants, including speech, action, gesture, emotion, and touch.

A total of 84 predominantly white caregivers and their 18- to 40-month-old toddlers participated in two studies. In Study 1 ($N = 44$), dyads were recorded at home during one free-play interaction. In Study 2 ($N = 40$), recordings were collected during playtime, mealtime, and book sharing across two days. Results revealed that multiple dimensions of infant-directed communication occurred across all interactions, and that multimodal cue use increased in response to infant vocalizations ($p < .02$) and gestures ($p < .001$). While individual caregivers tended to use communicative cues consistently within a given activity context, their cue use varied across both contexts and caregivers ($ps < .001$). These findings demonstrate that everyday caregiver–infant communication is highly multidimensional and highlight the importance of capturing this richness to understand both theoretical mechanisms and individual differences in infants' communicative environments.

9:20 AM — Talk 2

Metacognition for Facial Expressions

Zane Brand & Curt Carlson

Texas A&M Commerce

This ongoing project examines how memory beliefs influence metacognitive judgments for facial expressions. In Experiment 1, we replicated the emotional salience effect—where emotional faces receive higher judgments of learning (JOLs) than neutral faces without great benefit to accuracy— for disgusted and surprised expressions, which had not been studied previously. In Experiment 2,

however, this effect did not extend to pre-JOLs, which are made before stimulus presentation. While Pierce et al. (2023) found an emotional salience effect for pre-JOLs with words, no prior research had tested this with faces. We hypothesized that metacognitive judgments for faces may rely less on prior belief than for words. To test this, Experiment 3 used a 2 (stimulus type: word vs. face) × 2 (emotion: happy vs. neutral) within-subjects design with pre-JOLs as the dependent variable. Experiment 3b, an online survey, asked respondents to predict a hypothetical participant's recognition accuracy for different expression types, with stimulus type manipulated between subjects. Results from both studies revealed an emotional salience effect for both pre-JOLs or global predictions with both words and faces. In our current Experiment 4, we are examining whether this effect appears for happy and angry faces but not for surprised and disgusted faces.

9:40 AM — Talk 3

Examining perceptual grouping on stages of processing in visual working memory: an ERP study

Hanane Ramzaoui & Melissa C. Beck

Louisiana State University

Visual working memory (VWM) is a limited-capacity system, but its efficiency can be enhanced when stimuli are grouped based on similarity. It remains unclear at which specific VWM processes grouping exerts its influence. To address this, we examined the effects of grouping through feature repetition while measuring ERPs associated with attention, individuation-encoding (N2pc), maintenance (CDA), and comparison (N2, FN400). Participants encoded arrays of colored squares that either included color repetitions or not, and then responded to a single-item probe. Behaviorally, repeated stimuli improved change detection accuracy. Arrays with color repetition enhanced accuracy for repeated items and additionally benefited memory for unrepeated items, suggesting compression of repeated representations. At the neural level, we predict that an increase in N2pc and a decrease in CDA amplitude for repeated stimuli would indicate grouping during individuation-encoding and maintenance. Furthermore, reduced N2pc, N2, or FN400 onset latencies for repeated trials would suggest prioritization of grouped items during comparison. In change trials, decreased N2 and FN400 amplitudes or latencies for repeated stimuli would indicate grouping-related efficiencies in comparison processes. Together, these findings will advance our

understanding of processing efficiency in VWM. The results to be presented at the conference are part of a registered report (doi.org/10.17605/OSF.IO/8ZS96).

9:40 AM — Talk 3

The Impact of Catholic Titles on the Perception and Aestheticization of Violence in Figurative Paintings

Atenas Campbell de la Cruz

Universidad Autónoma de Ciudad Juárez

The impact of Catholic Titles on figurative paintings depicting violence were studied using both explicit and implicit measures. When paintings were described as Catholic, they were significantly rated as more beautiful and interesting, and less violent than when they were described as Non-Catholic. Therefore, demonstrating that Catholic themes associated with these artworks overshadow their violent content. These was demonstrated via hedonic ratings. Thus, suggesting an aestheticization of violent imagery when connected to Catholic themes. Implicit responses, assessed using the Implicit Association Test, showed faster responses when Violent Catholic Paintings were associated Positive Adjectives and slower responses were associated when violent Non-Catholic Paintings were associated with Negative Adjectives. These implicit responses confirm previous explicit results.

Session 2

10:40 AM — Talk 1

Repulsion in Perception and Decision Making: A Bayesian Sampling Explanation

C. Stella Qian, Jian-Qiao Zhu, Jake Spicer, Nick Chater, & Adam N. Sanborn

Texas State University

There are multiple repulsion biases in perceptual decision making. In motion transparency, the perceptual experience of two superimposed coherent motions is biased toward repulsion when the angle between the two exceeds 30 degrees (Braddick et al., 2002). Moreover, in decision making, when a discrimination task proceeds a perceptual judgement task, the former biases the latter away from the discrimination reference probe (the repulsion effect; Zamboni et al., 2016).

We tested whether these two repulsion effects co-occur by presenting participants with transparent motion stimuli followed by two tasks sequentially: motion direction discrimination relative to a

probe, then motion direction reporting of all the motion components. Both perceptual and decision repulsion effects were observed, and we hope to provide a unified explanation. Bayesian models can explain the repulsion between two transparent motions as an inference using an internal generative model (Gershman et al., 2016), specifically inferring and subtracting the joint motion of the stimuli, while evidence accumulation models explain the repulsion effect in decision making (Spicer et al., 2022). We propose that the brain sequentially samples from the posterior distribution over the generative model given the stimuli (capturing repulsion between the motions) with optimal stopping (capturing repulsion from the probe).

11:00 AM — Talk 2

Survey of Academic Language Experiences (SALE)
Andy Huynh, Colin Scholl, & Ana Schwartz
University of Texas at El Paso

Dual-language instruction is one way that heritage bilinguals can maintain both of their languages, but little research has been conducted on the impact of dual-language instruction on the subsequent experiences of bilinguals in college. The Survey of Academic Experiences (SALE) asks bilinguals to rank the degree of dual-language instruction they received from kindergarten through their fourth year of college. In Experiment 1, bilingual UTEP students completed the SALE and the Language Experience And Proficiency Questionnaire (LEAP-Q) (Kaushanskaya et al., 2007), and an exploratory factor analysis yielded an 8-factor solution. In Experiment 2, $n = 56$ bilingual UTEP students completed the SALE, the LEAP-Q (Kaushanskaya et al., 2020), and the Multilingual Naming Test Sprint (MINT-Sprint) (Garcia & Gollan, 2022). Based on the exploratory factor analysis in Experiment 1, composite z-scores were created for each factor. Regression analyses with these composite z-scores provide evidence that the degree of dual-language instruction in elementary school was predictive of scores on an objective measure of proficiency, the MINT Sprint, above and beyond traditional measures of bilinguals' linguistic experience such as age of acquisition, self-ratings of proficiency, and self-reports of language exposure.

11:20 AM — Talk 3

Does Math Impact Language? A Failure to Replicate Cross-Domain Structural Priming

Kristen Tooley

Texas State University

Structural priming in language occurs when the structure of one sentence influences syntactic processing of a subsequent sentence (e.g., Bock, 1986). This priming effect has also been shown to occur across different domains, such as from mathematics to language (e.g., Scheepers et al., 2011). Experiment 1 sought to determine whether the structure of a mathematical prime would influence the structure of a produced sentence, even if the structure was based on an exponent operation that lacked an overt operator. A weak numerical trend toward a math-to-language priming effect was not found to be statistically significant. Experiments 2-3 sought to replicate Scheepers et al.'s (2011) original findings using online (Exp. 2) and in-person data collection (Exp. 3) procedures. Individual and combined analyses of both experiments failed to detect a cross-domain priming effect. Bayes Factor estimates suggest a null effect was more likely than a priming effect in the combined dataset. The results from these experiments suggest that cross-domain structural priming may not be as robust as the published literature implies and signals a need for additional research to more adequately determine whether these effects are reliable and meaningful.

11:40 AM — Talk 4

Vicarious defeat stress impairs spatial memory performance in female adolescent c57BL/6 mice

Anapaula Themann

University of Texas at El Paso

Exposure to psychological stress has been shown to increase the incidence of major depressive disorder, primarily in juvenile populations. Recently, our lab has established the vicarious defeat stress (VDS) paradigm for the study of psychological stress-induced depression-related behavior in vulnerable populations such as adolescents and females. Thus, the goal of this study was to examine whether exposure to VDS, in adolescent female mice, resulted in an impairment of spatial memory performance on a standard Morris water maze (MWM) task. Here, on postnatal day (PD)35, adolescent female mice witnessed the defeat bout of a male conspecific by a CD-1 male

aggressor for 10 minutes across 10 consecutive days. Forty-eight hours after, mice were tested on spatial memory performance on the MWM (PD46-57). We found that adolescent female mice, independent of stress exposure, learned to find the location of the escape platform across the training trials. However, 24 hours after training, female mice exposed to VDS displayed increases in the latency to locate the escape platform, indicating impairment of spatial memory. Collectively, this preclinical study uncovered that VDS, in adolescent female mice, results in memory impairment, one of the key phenotypes exhibited by individuals suffering from major depression.

Session 3

1:20 PM — Talk 1

Linking Attentional Synchrony to Action Performance
Jacob Stotts, Matthew Ferrell, & Jessica Kosie

Arizona State University

Understanding how attention affects learning is critical for cognitive science. Prior research suggests that, across viewings of a novel action sequence, observers increasingly tune in to information that is valuable for learning and ignore information that is irrelevant (Kosie & Baldwin, 2019). In the current study we used Hard, Recchia, and Tversky's (2011) "Dwell-Time Paradigm" to measure observers' attention as they learned to enact a novel, naturalistic activity sequence (a new method of shoelace tying) across repeated self-paced viewings. After each self-paced viewing, participants attempted to perform the novel shoe-tying method. To evaluate observers' attention, we used a dynamic time warping analysis (Tormene et al., 2009) that allowed us to quantify how similar individual participants' attentional patterns were to all other participants in the study. Preliminary results suggest that attentional synchrony increases across repeated viewings, as observers figure out which moments of activity to attend to and which to ignore (β = -0.46 (SE = 0.05), p < .001). Participants' action attempts are currently being coded for accuracy by a second group of participants. We predict that participants with stronger synchrony (i.e., attentional patterns that are more similar to others in the study) will perform better on the shoe tying task. The findings could provide a new understanding of the role attentional synchrony plays in learning new actions.

1:40 PM — Talk 2

How Do Dual Tasks Affect ID Verification? A Mobile Eye-Tracking Analysis

Nathan Wieters, Dawn Weatherford, & Roman Pardo

Texas A&M University – San Antonio

ID screening is a two-part process — the card and identity must be authenticated. Psychological research has typically focused on identity verification without considering card verification. To fill this gap, the present study had participants complete an ID verification task while wearing eye-tracking glasses to record gaze behavior during face-matching decisions. After 2 practice trials, a research assistant presented 48 physical ID cards with embedded facial images, one at a time, beside a computer monitor that presented a facial videos and calendar date. Participants were asked to decide if the ID card was valid on a 6-option scale from Definitely Yes to Definitely No in response to one of three randomly assigned authentication conditions: date authentication only, face authentication only, or date and face authentication. I predicted that dual-task interference would affect accuracy. I also predicted that eye-tracking metrics (e.g., fixation counts and duration) would vary by condition and accuracy.

2:00 PM — Talk 3

Perceptual Plasticity in Bilinguals: Language Dominance Reshapes Acoustic Cue Weightings

Annie Tremblay & Hyoju Kim

University of Texas at El Paso

Speech perception is shaped by language experience, with listeners learning to selectively attend to acoustic cues that are informative in their language. This study investigates how language dominance, a proxy for long-term language experience, modulates cue weighting in highly proficient Spanish-English bilinguals' perception of English lexical stress. We tested 39 bilinguals with varying dominance profiles and 40 monolingual English speakers in a stress identification task using auditory stimuli from Tremblay et al. (2021) that independently manipulated vowel quality, pitch, and duration. Bayesian logistic regression models revealed that, compared to monolinguals, bilinguals relied less on vowel quality and more on pitch and duration, mirroring cue distributions in Spanish versus English. Critically, cue weighting within the bilingual group varied systematically with language dominance: English-dominant bilinguals patterned more like

monolingual English listeners, showing increased reliance on vowel quality and decreased reliance on pitch and duration, whereas Spanish-dominant bilinguals retained a cue weighting that was more Spanish-like. These results support experience-based models of speech perception and provide behavioral evidence that bilinguals' perceptual attention to acoustic cues remains flexible and dynamically responsive to long-term input. These results are in line with a neurobiological account of speech perception in which attentional and representational mechanisms adapt to changes in the input.

2:20 PM — Talk 4

Faces in the Crowd: Effects of Personality on Face Recognition
William Blake Erickson, Dawn R. Weatherford, & Stephanie Gooding

Texas A&M University – San Antonio

Individuals high in Dark Triad personality traits (Machiavellianism, narcissism, psychopathy) may perceive the world differently than those low in these traits. Therefore, we investigated how these socially relevant traits relate to memory for faces versus other kinds of stimuli. Across three experiments, we compared participants' memory for faces and other stimuli and administered a subclinical Dark Triad survey. E1 and E2 participants viewed upright study and test images. We found high narcissism predicted poorest face recognition performance, but recognition for other stimuli was unaffected. Other traits had weak relationships with memory. To investigate whether other perceptual (e.g., holistic face processing) and/or other social (i.e., additional personality traits) mechanisms might relate to our effects, E3 presented upright or inverted study and test images and used the short Big Five Inventory. E3 collection is ongoing, but patterns remain consistent with E1 and E2. If the locus of the relationship between narcissism and facial memory is perceptual, face inversion may attenuate the effect. However, adding additional personality instruments may reveal relationships between face and non-face memory that may connect with a variety of real-world circumstances

POSTER SESSION I

Poster #1

The Other Race Effect Influence on Race Categorization
Paola America Garcia Carrillo & Hannah Volpert-Esmond

University of Texas at El Paso

Distinguishing and categorizing faces is important for several areas of human interaction. Face categorization is a process in which the observer uses facial features to identify and then categorize the observed face into social groups, including racial/ethnic groups. Regardless of accuracy, racial categorization influences downstream outcomes, including bias or prejudice. We sought to understand patterns in how Latino participants categorize White, Black and Latino faces, as well as how these patterns relate to attributes of the perceiver. Participants completed three blocks: In Block 1, they categorized White and Black faces; In Block 2, White and Latino faces, and in Block 3, Latino and Black faces. We found that participants were fastest and most accurate when identifying Black faces and highly racially prototypical faces. Accuracy in categorizing Black faces increased as prototypicality increased. Prototypicality had a greater effect on accuracy for White and Latino faces in Block 2. Ethnic identity increased the accuracy in identifying Latino faces as Latino. Our study found the categorization of White, Black, and Latino faces was influenced by stimulus-related characteristics such as prototypicality as well as by attributes of the perceiver such as sense of belonging to their ethnic group. The results of our research would present implications for racial interactions that could affect prejudices and perceptions based on race.

Poster #2

How participation in Technology courses impacts older adults' digital networks and use of technology
Genesis Aguirre, Yessenia Lopez, Miyah Ray-Morales, Christian Ruiz-Ortiz, & Ashley S. Bangert

University of Texas at El Paso

Aging is linked to increased social isolation which has negative consequences for older adults' mental and physical health. Technology-enabled connections may enhance opportunities for older adults to connect with family as well as services in their community. However, the generational

digital divide exists whereby older adults show less use of technology than younger individuals due to lower digital literacy and accessibility. In the current study, surveys were administered to older adults completing technology courses offered through El Paso Community College's Senior Adult Program. The surveys, which gathered information about older adults' use and perceptions of modern technology, their social networks, and their technology self-efficacy, were administered at the beginning and end of the 12-week courses. Data will report on changes seen in participants' social networks, use of technology, and perspectives on technology after participating in the 12-week technology course. These results will inform future efforts for developing training programs to enhance older adults' technology use to support their social connectedness and engagement. This material is based upon work supported by the National Science Foundation (NSF) under Grant No. 1952243.

Poster #3

Young children in two cultures tend to name objects in the direction of their native text

Christopher Sepulveda, Nadeen Kherbawy, Sagi Jaffe-Dax, & Christine Potter

University of Texas at El Paso

For skilled readers, the direction of their native text (e.g., left-to-right for English vs. right-to-left in Hebrew) influences their visual attention (Shaki et al., 2012). However, it is not known when children first develop language-specific biases. The goal of this study was to test whether young children (2.5-4 years) exposed to different writing systems show different patterns of attention before they learn to read. We compared the behavior of English and/or Spanish learning children in the US (N = 23 to date) and Hebrew-learning children in Israel (N = 80). On each of 20 test trials, children saw a set of 3 images presented in a horizontal row on a card and were asked what they saw. An experimenter noted which item the child named first, second, and third. On average, US children named the left-most object first and the right-most object last, while Hebrew-learning children tended to name objects right-to-left, and these tendencies increased with age. These results provide evidence that children's visual attention is influenced by their native text even before they receive formal instruction, illustrating the power of cultural conventions on perceptual processes. Future studies will explore how early visual biases may be related to literacy skills.

Poster #4

Selective Attention and Racial Bias in Simulated Shoot Decisions

N. J. Jayce Owens-Boone, M.S. & Hannah I. Volpert-Esmond

University of Texas at El Paso

Police shootings of unarmed people of color, particularly Black men, remain a critical social problem. Although police use of force is relatively rare, racial disparities in fatal encounters underscore the need to understand the cognitive processes that influence shooting decisions. Prior research shows that race is encoded rapidly in perception and linked to stereotypes that associate Black and Latino Americans with criminality and threat, shaping attention, evaluation, and responses to ambiguous objects. The present study employs a modified dot-probe and first-person shooter paradigm to investigate how racial cues guide selective attention and decisions to shoot. Black, Latino, and White male faces serve as primes, followed by probes consisting of weapons or non-weapons (e.g., cell phones, wallets, tools). Participants made rapid behavioral "shoot" responses by using keyboard presses ("shoot" with 'A'; "don't shoot" with 'L'), with accuracy and reaction times serving as indices of bias. We hypothesize that participants will show faster responses to probes following Black and Latino faces and will be more likely to "shoot" weapons—and potentially non-weapons—after these primes compared to White faces. This study can contribute to theoretical models of stereotype-driven attention and inform strategies to address racial disparities in police use of deadly force.

Poster #5

Misinformation Susceptibility and its Relationship to Intellectual Humility, Political Orientation, and Discernment using a Dual-Process Paradigm

Matthew Guerra & Dawn Weatherford

Texas A&M University – San Antonio

Misinformation is an important issue and one that has been studied in a variety of ways. For example, Bago et al. (2020), examined misinformation from a cognitive perspective and found that our intuitive and deliberative mechanisms for cognition may play an important role in general susceptibility to misinformation. This study will serve as a replication and an extension to this line of experimentation. I will do this by examining the interactions between discernment, intellectual humility, and political orientation in misinformation susceptibility. I predict that a) discernment

will reduce misinformation susceptibility b) Intellectual humility, the recognition of one's cognitive fallibility and openness to revising beliefs, will mitigate the effect of misinformation susceptibility; and c) Political orientation will positively correlate with misinformation susceptibility along the subscales of General Authoritarianism and Social Control. Participants will complete a two-response paradigm as implemented by Bago et al. (2020), with a one-response baseline condition and a two-response experimental condition. Regression analyses will examine main and interaction effects, exploring whether intellectual humility mitigates cognitive rigidity associated with authoritarian and control-oriented ideologies. This research aims to advance understanding of metacognitive traits and ideological factors in shaping decision making, with implications for addressing misinformation in polarized environments.

Poster #6

Remembering to Remember: Training the Mind Against Age-Related Declines in Prospective Memory

Faiza Murtaza , Dylan Ellis, Connor Dupre, & Hunter Ball

University of Texas at Arlington

Prospective memory refers to the ability to remember to carry out future intentions, such as forming the intention in the morning to take medication before dinner. This ability is critical for healthy aging and maintaining independence. Cognitive training may improve PM in older adults at risk of Alzheimer's disease, with early evidence suggesting it can boost memory and slow cognitive decline. The present study investigated whether a cognitive training intervention could mitigate PM declines associated with healthy and clinical aging. Healthy older adults were randomly assigned to either a training condition (N = 30) or a control condition (N = 27). Four patients with Mild Cognitive Impairment (MCI) were also assigned to the training condition. The training condition included strategy-based instructional videos, a computerized PM task, homework, and quizzes, whereas the control condition listened to audiobooks. Results showed PM improvements for both laboratory and more naturalistic tasks in the training condition, but not the control condition. Healthy older adults in the training condition demonstrated enhanced PM in both laboratory and naturalistic settings, and participants with MCI showed similar improvements. Participants also reported greater memory confidence and noticed everyday improvements

following training. These findings highlight the promise of simple, structured training for supporting brain health in aging.

Poster #7

When Age Is the Suspect: Culture and Stereotype Threat in Lineup Accuracy
Jorge A. Santillan Ibarra, Maria G. Santillan Ibarra, William B. Erickson, & Roman M. Pardo

Texas A&M University – San Antonio

Previous literature demonstrates that older adults are less accurate than younger adults at eyewitness identification tasks, and police/witness interactions may exacerbate these disparities by producing age-based stereotype threat (ABST). ABST occurs when an older adult fears confirming a negative age-related stereotype, such as a decline in memory or cognitive abilities. Reminding older adults of the effects of age on memory could affect the accuracy of eyewitness identification tasks, making them a vulnerable age group. Moreover, as the world becomes more diverse, cultural values may moderate ABST. Older and younger adults viewed a crime video and were asked to identify the perpetrator. ABST was manipulated by reminding half the participants of the influence of age on memory. We also measured participants' cultural orientation (individualism vs. collectivism) as a moderator. We observed ABST effects on Target Absent lineup identification and the relationship between confidence and accuracy in the younger adult participants. Among older adults, there was no significant difference between lineup types or threat conditions. Multivariate techniques measured the magnitude and direction of the influence of cultural orientation on ABST susceptibility.

Poster #8

The Role of Synchronized Parent-Child Interactions in the Relationship Between Parental Education and Early Word Learning
Fatima Khan, Sara Paredes Raquel, Elizabeth Perkovich, & Hanako Yoshida

University of Houston

Parental education is linked to children's vocabulary development, with research showing that more highly educated parents tend to provide their children with richer linguistic input that supports word learning [1]. Word learning is further improved when parents' object labeling aligns

with children's visual attention [2], an interaction called visual optimal naming moment (VONM). Although previous studies have examined the impacts of parental education on vocabulary outcomes [1,3], little is known about the role VONMs play in this relationship [4]. The present study used head-mounted eye-trackers to document VONMs during parent-child play and related these to children's receptive and expressive vocabulary scores. Participants consisted of 33 neurotypical children aged 37-68 months (M = 54.28, SD = 8.68; 18 females) and their parents, whose education ranged from 12-20 years (M = 16.45, SD = 2.44). Preliminary moderation analyses showed that VONM frequency, but not duration, moderated the association between parental education and children's expressive vocabulary (b = 5.471, p = 0.017). Specifically, higher parental education predicted higher expressive vocabulary scores when parent-child interactions included frequent VONMs. These findings reveal how VONMs enhance parental education's support for expressive vocabulary, informing strategies for improving early word learning through aligned interactions during play.

Poster #9

Does a Curiosity Gap Shift Response Criterion in an Old/New Recognition Task?
Nevaeh Mackey-Underwood & Amanda R. Stevens
Tarleton State University

This project will test whether inducing curiosity during study shifts response criterion beyond inflating metacognitive judgments of learning (JOLs). Participants (N=80) will study trivia facts under two within-subjects conditions: (a) a curiosity-gap format (question preview, then answer) and (b) a statement format (declarative only). After each item, participants will provide a 0–100 JOL. Following a brief distractor, an all-declarative old/new test will be administered. Using a yoked lure-pool design (new items preassigned to each condition), we will compute condition-specific hit and false-alarm rates to derive signal-detection measures of sensitivity (d′) and criterion (c), along with calibration metrics. We predict higher JOLs for curiosity-gap items, a more liberal response criterion (lower c) for lures paired with curiosity, and little or no change in d′, yielding overconfidence and poorer calibration under curiosity. Findings will clarify whether curiosity affects metacognitive monitoring alone or also decision policy at retrieval, advancing theories of cue-utilization and the monitoring-control framework. Results have practical implications for

study strategy recommendations: curiosity may increase perceived learnability yet bias recognition decisions, potentially misguiding control behaviors.

Poster #10

Eye Movements in the Kent Face Matching Task
Melena Gonzalez
Texas A&M University – San Antonio

Eye tracking data from 19 participants (N = 19) was analyzed using a repeated-measures ANOVA. The eye tracking measures, including fixation count and fixation duration were recorded during the Kent Face Matching Task (KFMT). Analysis results revealed a within-subjects effect between Area of Interest (AOI), there was a significant difference of eye movements between the two types of AOI's (i.e. Large Face and Small Face), $F(1,592) = 32.61$, $p < .001$; $F(1,580) = 123.13$, $p < .001$. However, no corresponding AOI eye movement patterns predicted the outcome accuracy of the match vs mismatch trials.

Poster #11

Applied Color Perception on Cognition and Decision-Making in Search Detection Tasks
Erin Silvas
University of Texas at San Antonio

Psychophysical research on color filters tends to focus on information lost directly due to a filter. However, many interactions, particularly those relying on color, depend on relationships among and configurations of information sources. In the current research, we focus on narrow-band color filters and how those filters may disrupt the perception of target shape cues. By adapting multiple facets of stimuli, we examine how these disruptions influence attention and information accumulation through the application of a Linear Ballistic Accumulator Omissions Model. We will report on the impact of disruption on visual stimuli with filtered overlays within a search detection task and their influence on varying perceptual cues that may affect the rate of information processed by an individual. We find performance with unfiltered search arrays to be more accurate. LBAO model fits indicate that both information accumulation rate and response caution increase when color filters are applied.

Poster #12

An Iterative Approach to Concept Combination and Emergence

Visheeta Chandolia

Texas A&M University

Concept combination can enhance creative outcomes during idea generation, but its use for measuring creativity remains underexplored. It is also associated with emergent properties-where combining two concepts yields unique features not attributed to either parent concept. Literature shows that second interpretations of combinations had more emergent properties. We proposed that a generative approach to concept combination may be associated with more emergent properties, which can be used as a measure of creativity in concept combination tasks. We presented five noun-noun pairs (e.g., OIL BAG) to participants, who generated as many interpretations of the combinations as possible in 2 minutes, then listed features for each interpretation for 2 minutes. We compared these features to a pilot-generated list of features of each noun to identify emergent properties, then analyzed their novelty, frequency and temporal features. Implications of a generative approach to concept combination and emergence for measuring creativity are discussed.

Poster #13

Eyewitness Identification and Context Reinstatement

Kaylie Brundage & Curt Carlson

East Texas A&M University

Despite context reinstatement producing significant effects in the basic memory literature (Smith & Vela, 2001), few have applied it to the eyewitness identification paradigm, and none have utilized the most recently accepted analysis methods based on signal detection theory (Wixted & Mickes, 2014). Those who have applied context reinstatement to the eyewitness paradigm have found mixed results (Brown, 2003; Cutler et al., 1986, 1987; Evans et al., 2009), likely due to methodological issues and differences in the context manipulations utilized. Similarly, only one study has applied it to lineup performance (see Vredeveldt et al., 2015), despite mental reinstatement yielding similar effect sizes to context reinstatement (Smith & Vela, 2001) and being a significant component of the cognitive interview (Geiselman et al, 1984), resulting in countless studies investigating its effect on eyewitness recall. This research aims to compare the effects of

both context reinstatement and mental reinstatement on eyewitness lineup performance, as well as their impact on the confidence-accuracy relationship, using a 3 (context: context reinstatement, mental reinstatement, control; between) x 2 (lineup: target present, target absent; within). Data analysis will be conducted using mixed model ANOVAs, ROC, CAC, and exploratory RT analysis. Preliminary findings will be presented pending participants.

Poster #14

Seeing Gray? Color Incongruity' Effect on Facial Identification
Taylor Meier, Roman Pardo, Nathan Wieters, Graci King, & Omar Olalde
Texas A&M University

The cognitive processes that guide face matching decisions during identity document (ID) screening are not well understood. Importantly, research has revealed multiple biases. This study investigated color incongruity bias (i.e., one face image presented in color and one in grayscale increases the likelihood of accepting fake IDs) along with eye tracking measures (i.e., fixation count, fixation duration). Participants N=25 were randomly assigned to compare color or grayscale IDs to a 10 s color video of a person moving their head side to side across 50 face-matching trials (2 practice; 48 critical) with medium prevalence (24 match, 24 mismatch). We analyzed behavioral and eye tracking measures with respect to Congruence (color/grayscale), Match Type (match/mismatch), Accuracy (correct/incorrect) Areas of Interest (AOIs;ID Face, ID Non-Face, Monitor Face, Monitor Non-Face). Signal detection indices (discriminability (d') and response bias (c)) showed no significant difference between groups. ANOVAs for fixation count and duration revealed a significant interaction of Congruence and AOI, such that color IDs and task-relevant AOIs increased fixation count and duration. This bias has implications that may affect security and law enforcement and inform the role of human screeners in the future of ID verification systems.

Poster #15

Effects of Modality and Language Use on Bilingual Discourse Updating
Diana Uribe & Ana I. Schwartz
University of Texas at El Paso

Research on discourse processing has predominantly focused on text-based representations, yet constructing a discourse often involves incorporating both written and spoken information. This

study examined how discourse integration varies across modalities (reading vs. listening) and whether language use and proficiency modulate these effects. Highly proficient Spanish English bilinguals were presented with expository passages that described two fictitious science facts, in which a critical fact was revised in the second half. The passages were presented in either written (text-based) or spoken (audio-based) modalities, and participants completed four passages in English and four passages in Spanish. After each passage, participants completed a recall task followed by multiple-choice comprehension questions. The results suggest that updating a discourse model is more effective when information is presented in the language most frequently used within the relevant modality. Specifically, participants demonstrated stronger oral and listening skills than reading skills in Spanish. In this case, accuracy was higher in the audio modality when the information was presented in Spanish, regardless of overall language proficiency.

Poster #16

Examining the Role of Emotional Valence and Processing Fluency in the Illusory Truth Effect

Tyler Maddux & Amanda R. Stevens

Tarleton State University

The illusory truth effect (i.e., the tendency to judge repeated statements as more truthful than new ones) may be influenced by emotion. Prior work shows that positive content is often processed more fluently, whereas negative content can elicit deeper encoding and enhanced recollection (Kensinger & Schacter, 2006). Recent evidence indicates that positive words, but not negative words, are processed more fluently than neutral words, although both are judged more memorable than neutral (Pierce et al., 2023). Building on these findings, the present study will investigate whether emotional valence modulates the illusory truth effect. Participants will study positive, negative, and neutral statements and later rate the perceived truth of repeated (studied) and new statements. We predict a main effect of repetition: repeated statements will be judged as more truthful than new statements across valence. We further ask whether valence alters the magnitude of this effect, with the exploratory prediction that positivity-linked fluency may magnify the effect, whereas negativity-linked recollection may attenuate it. Reaction times during truth judgments will be recorded to index processing fluency as a function of repetition and valence. Results will

clarify how emotional valence impacts belief through fluency and memory, informing theories of misinformation acceptance and affect-cognition interactions.

Poster #17

The Role of Perceptual Differences in Neural Dynamics and Speech Fluency Among Adults Who Stutter

Alexandra Monroy, Edward C. Brown, Andrew Bowers, Tim Saltuklaroglu, Megan Young, & M. Blake Rafferty

New Mexico State University

Developmental stuttering is a speech-motor control disorder that disrupts speech fluency (Chang & Guenther, 2020). Although stuttering is typically viewed as an issue with speech production, adults who stutter (AWS) also present with subtle differences in speech and language perception (Jenson et al., 2016; Saltuklaroglu et al., 2017). Little is known about how these perceptual differences relate to speech fluency. In a series of recent electroencephalography (EEG) studies, our group has reported that neural oscillations recorded during a naturalistic speech production paradigm—consisting of reading questions and providing verbal responses—are able to a) differentiate between AWS and typically fluent control subjects and b) predict stuttering severity and the frequency of stuttered trials for AWS (Brown et al., 2024; Bowers et al., submitted). In this to-be-completed project, we reanalyze the data from Brown et al. and evaluate whether perceptual differences in AWS serve as a potential moderating factor in task performance and neural response. We specifically anticipate that AWS will show altered sensitivity to the variable linguistic complexity present in our question stimuli, resulting in altered alpha (8-13Hz) and beta (14-30Hz) oscillatory dynamics. We additionally evaluate whether altered perceptual sensitivity contributes to accumulating sensorimotor instability that results in disfluent speech.

Poster #18

The Impact of Perceived Task Difficulty and Need for Cognition on Metacognitive Judgments and Associative Recognition Memory Performance

Beau D. Purdom & Amanda Stevens

Tarleton State University

Problem: Effective metacognitive monitoring can help to optimize learning. Judgments of learning (JOLs) are a type of monitoring judgment in which learners predict their ability to subsequently recall studied information. Learners' JOLs tend to exhibit overconfidence, particularly in challenging tasks where the disparity between perceived ability and actual performance is greatest. While prior research has highlighted the detrimental effects of such overconfidence, limited work examines how expectations of task difficulty influence JOL accuracy and memory performance. We aim to address this gap by examining whether priming participants with information about task difficulty impacts the accuracy of JOLs and recognition memory performance. Understanding this relationship could inform efforts to improving metacognitive self-regulation, both within and beyond an academic setting. Additionally, this study investigates whether individual differences in cognitive engagement, indexed by scores on the Need for Cognition (NFC) scale (Cacioppo & Petty, 1982), moderate these relationships.

Method: This study employs a mixed methods design to examine the influence of perceived task difficulty on JOLs and memory performance, as well as potential moderations effects of NFC on these relationships. Participants will include U.S. citizens ages 18–25 recruited via Prolific. Participants will be randomly assigned to one of three groups regarding expectations of task difficulty: hard, easy, control/none. Participants will study a series of stimulus pairs and provide JOLs for each pair, followed by a distractor task and then a cued recall test. Analyses will consist of two one-way ANOVAs to assess the effects of task difficulty expectations on JOLs and cued recall performance, as well as analyses to examine potential moderation effects of NFC on JOLs and performance.

Expected Results: The present study is somewhat exploratory in nature. It may be the case that participants who are primed to expect a difficult task put forth greater effort toward the task and, presumably, would demonstrate better cued recall performance compared to those who expect a less difficult task. Alternatively, we may find that expecting a difficult task has a reverse or null effect on performance. We similarly refrain from predicting specific effects of task difficulty expectations on JOLs at this time. Our primary focus is on potential moderation effects of NFC on the relationships between expectations and the dependent variables. We predict a moderation effect of NFC on the relationship between expectations and performance, such that the performance of

participants with high NFC scores will positively correlate with task difficulty expectations, and participants with low NFC scores will exhibit a converse pattern.

Conclusion: This research will underscore the importance of setting realistic expectations of task difficulty in order to foster effective learning. We aim to contribute to a greater understanding of the interplay between task difficulty, metacognitive monitoring, and memory processes. Practical implications of this research center on educational practices, emphasizing the value of fostering realistic task expectations to optimize study strategies and academic outcomes. Additionally, by incorporating NFC assessments, this study contributes to understanding how individual cognitive engagement moderates learning processes.

Poster #19

Examining the Relationship Between Mental Imagery Ability and Susceptibility to False Memories

Bobbie Jo Hurt, Jocelyn Herring, Nathan Cummings, Enike Domia, Sunday Stewart, Isella Villigran, Jeffrey Anastasi, & Jessica Lee

Sam Houston State University

Problem: Source monitoring is a cognitive process that allows one to determine the origin of one's memories. A related area of study that is related to source monitoring is "reality monitoring" (Johnson & Raye, 1981), which involves distinguishing between internally generated and externally generated events (i.e., whether something was imagined or if it occurred in "real life"). Struggles with reality monitoring may be associated with lapses in memory or having a memory for something that did not actually occur (i.e., false memories). Research investigating reality monitoring often involves participants performing or imagining certain tasks, then being instructed, after a delay, whether the task was performed or imagined (Brandt et al., 2014; McDaniel et al., 2008). Reality discrimination issues are believed to arise due to individuals having vivid mental images, as these images are less distinctive from reality in their sensory characteristics. Thus, those with greater vividness of visual imagery might be prone to experiencing confusion between imagined and real events. One such study examining reality monitoring of performed vs. imagined events found that the use of objects influences the reality monitoring of both children and adults (Sussman, 2001). Because real-life tasks involve more than

simply static images, the current study aims to assess the impact of vividness of visual imagery and kinesthetic visual imagery (i.e., vividness of dynamic mental images or actions) on an individual's proneness to reality monitoring errors. The inclusion of kinesthetic visual imagery is not common in prior literature but is an approach that may provide further insight into the relationship between mental imagery and reality monitoring of tasks by examining an individual's ability to imagine themselves performing a specific movement.

Method: The study consisted of two sessions held exactly one week apart. During the first session, participants were presented with 20 tasks that they were either to perform or imagine as instructed. Drawing inspiration from Brandt et al. (2014), McDaniel et al. (2008), and Sussman (2001), the tasks chosen for the current study consisted equally of object manipulation as well as basic movements (without objects). A total of 30 tasks were chosen for the study, with the 20 tasks given during Session One counterbalanced across three test groups and 10 tasks used on the Session Two recognition test as distractor items that were neither performed nor imagined. For Session Two, exactly one week after Session One, participants completed a recognition sheet of all 30 tasks to determine if they remembered which tasks they performed, imagined, or did neither. After completing the recognition sheet, participants then completed two mental imagery questionnaires (KVIQ-10 and VVIQ [adapted for self-report]) to assess their mental imagery ability.

Results: We expected that individuals who have more vivid imagery skills would find it more difficult to correctly differentiate between tasks that were imagined compared to those that were actually performed. Individuals who have less vivid imagery skills were expected to be more successful at correctly identifying tasks that were imagined or performed. Participants were split into groups based on their imagery ability, and the groups' hit (correct identification) and "false memory" rates will be compared.

Conclusions: If our findings support our predictions, the current study will further demonstrate that vividness of mental imagery is associated with source monitoring errors. Specifically, the study would provide evidence that mental imagery is related to reality monitoring, such that individuals with more vivid imagery ability are more prone to experiencing "false memories" (e.g., believing they did something that they only imagined). Such findings would suggest that false

memories could stem from imagery-based cognitive processes rather than memory retrieval failures alone. Data collection is ongoing, but preliminary data will be provided.

Poster #20

Many FACETS, One Emotion: Reporting the Valence and Labeling of Emotional Faces
Graci P. King, Dawn R. Weatherford, Melena R. Gonzalez, Robin M. Rollins, Amanda L. Martinez, & Amy D. Bohmann
Texas A&M University – San Antonio

Common facial expressions correspond with universal emotions across cultures. Therefore, facial emotional expression (FEE) and recognition (FER) remain popular research topics. Nevertheless, many available face databases tend to represent limited emotional expression across identities. However, FACETS (Faces Across Camera, Emotions, Time, & Settings) provides more comprehensive options across 265 identities with 6 emotional expressions each (happiness, sadness, fear, anger, surprise and neutral) totaling 1,590 images. N =795 participants generated standardized norms. Each participant viewed 40 emotional facial images and provided an emotional label, valence rating, and genuineness rating. We will report descriptive statistics for each image to support investigations of facial perception, attention, and memory.

Poster #21

Somewhat Similar Sounds: A Novel Paradigm for Assessing Phonological Control
Hannah Pedigo, Alex Lawriw, & Jason M. Scimeca
Louisiana State University

Extensive research has examined phonological processing in a variety of listening paradigms and sound judgement tasks. Although cognitive control is essential for context-appropriate use of phonological information, these control processes remain poorly understood. To identify the contribution of domain-general and language-specific control processes, we modified two influential semantic control tasks and applied them to phonological control. In the first task, participants saw a cue word and decided which of three probe words sounded most similar to the cue. To manipulate control demands, we varied the phonological similarity between the cue and target word while carefully controlling for other psycholinguistic factors. In the second task, participants were told to ignore overall phonological similarity and instead decide which probe

word was most similar to the cue on a particular phonological feature (number of syllables, onset, etc.). Preliminary results show that phonological decisions were slower and less accurate in the putative "high control" condition (low similarity). This is consistent with prior work in the domain of semantic control and supports the hypothesis that similar control processes operate across domains. Future work will combine these new phonological tasks with non-invasive brain stimulation (TMS) to identify the neurocognitive mechanisms underlying phonological and semantic control.

Poster #22

Is Cohort Activation Modulated by Language Dominance?
Colin Scholl
University of Texas at El Paso

Researchers have shown that one type of memory retrieval process that supports the construction of discourse representations, coherence-based retrieval, is less efficient in a bilingual's non-dominant language (L2) compared to their dominant language (L1) (Schleicher & Schwartz, 2022). The current study investigated another type of memory retrieval process, cohort-based retrieval, in the L1 and the L2 using a sample of 44 highly proficient, college-aged Spanish-English bilinguals that read narrative passages all in their L1 or L2 and that did or did not contain inconsistent information. We failed to find any evidence of cohort-based retrieval or an effect of the inconsistent information on the earliest stages of processing as would be expected, and also observed no significant difference in the relative efficiency of cohort-based retrieval across languages. Based on these findings, we recommend a revision to the current description of cohort-based retrieval from the landscape model (van den Broek et al., 1999).

Poster #23

Cognitive Load of Language Control
Kyle Wolff, Berenice De Luna, Alexia Hernandez, Rachel Williams, & Iva Ivanova
University of Texas at El Paso

Bilingual language control involves cognitive processes that facilitate target language selection while minimizing interference from the non-target language (Green, 1998). Prior evidence from aftereffects (i.e., recovery) suggests activation of one language can temporarily impair lexical

access in another. However, the cognitive load during active language control remains understudied. We examine this using a dual-task design across two experiments. Spanish-English bilinguals described three comics while performing a trained finger-tapping sequence. Participants completed two sessions: a dual-language experimental session (Spanish, English, Spanish in Experiment 1; languages reversed in Experiment 2) and a single-language control session. Slower tapping rates indicate increased cognitive effort (Sjerps et al., 2020). We predict greater effort after switching: either steadily slower tapping throughout descriptions or temporary slowing post-switch. Results from two experiments using this approach provide real-time cognitive demand measurements during language control, complementing post-speech cost studies.

Poster #24

Influence of Accent and Language Control on Phonetic Alignment in Spanish-English Bilinguals

Berenice De Luna Flores, Gemma Repiso Puigdelliura, Kyle Wolff, & Iva Ivanova

University of Texas at El Paso

Alignment in dialogue refers to the tendency for speakers to adopt similar linguistics features, such as vocabulary and syntax, a phenomenon which has been associated with social bonding communicative efficiency (Pickering & Garrod, 2004). A specific dimension of alignment is phonetic alignment, where speakers modify their pronunciation to resemble their interlocutor (Pardo, 2006). Among bilinguals, this process is complex, as they must navigate multiple phonetic systems. Phonetic alignment is influenced by the interlocutor's speech but may also be modulated by the speaker's own language, as well as cognitive processes such as language control—the capacity to manage and suppress interference from the non-target language (Green 1998; Abutalebi & Green, 2007). This study aims to investigate how Spanish-English bilinguals phonetically align to different accent models in Spanish and explores the mediating roles of language control, and baseline phonetic production. Participants will complete a five-phase map description task, alternating interactions with two confederates: one with a Standard Mexican Spanish accent and one with American-accented Spanish. Alignment will be assessed through acoustic analysis of voice onset time, vowel production, and intonational patterns, while language control will be measured using inhibitory control tasks. We expect participants with stronger language control to resist aligning toward American-accented Spanish, consistent with Green's

Inhibitory Control Model (1998). This work builds on findings linking coordinated speech patterns to communicative success (Borrie et al., 2019) and extends them by connecting accent-driven convergence to individual cognitive control.

Poster #25

Do People Get "Stuck" on ChatGPT? Examining Internet Fixation with Generative AI

Zak McDonald & Julia Soares

New Mexico State University

Internet fixation occurs when engaging with internet search encourages future internet search use even when semantic memory should suffice (Storm et al., 2017). Two experiments investigated the extent to which internet fixation extends to searches conducted with generative AI (ChatGPT). In E1, participants were assigned to use only Google, ChatGPT, or memory to answer induction trivia questions. Then, they were allowed to choose any of these strategies to answer a subsequent easier set of questions. Participants in the search engine and AI conditions were less likely to answer using memory compared to those that initially used memory, showing an internet fixation effect in both conditions. E2 addressed the possibility that prior experience with Google and ChatGPT influenced participants' behaviors by using a lesser-known search engine and AI chatbot. Participants who used search or AI were again significantly less likely to answer the easy trivia questions from memory compared to the memory condition. E3 investigated whether this tool-specific internet fixation would extend to more practically significant queries. Participants who previously used ChatGPT reported that they would answer these queries significantly more often using ChatGPT compared to the other conditions, despite participants reporting that ChatGPT provides less reliable answers than Google.

DAY 2 — SATURDAY OCTOBER 11, 2025

TALKS

Session 1

9:00 AM — Talk 1

Enhancing Cognitive Well-Being through AI-Based English Learning Apps: Older Adults' Experiences in China

Yue D. Zheng, Jiahui Zeng, & Zhaojing Yuan

University of Texas at El Paso

This study explores the learning experiences and cognitive well-being of older adults in China who engage with AI-based English learning applications. A 12-week sequential mixed-methods design was employed with 88 participants aged 40–80 from diverse social and educational backgrounds. Participants were divided into groups using Duolingo and Liulishuo, with progress supported by trained tutors. Data were collected through standardized tests of depression, anxiety, and working memory, alongside weekly field notes, questionnaires, and interviews. Quantitative findings show that while depression and working memory did not significantly change, participants reported a notable reduction in anxiety levels. Subjective reports revealed overwhelmingly positive perceptions, with learners expressing increased motivation, concentration, and a sense of social connectedness. Qualitative analysis identified themes of self-directed learning, intergenerational communication, and identity reconstruction, highlighting how language learning fosters both psychological well-being and social engagement. Despite a high dropout rate in the Liulishuo group, Duolingo demonstrated greater feasibility by providing level-appropriate, interactive, and feedback-rich experiences. The findings suggest that AI-assisted mobile learning can enhance older adults' sense of autonomy, confidence, and life satisfaction, offering potential as a non-pharmacological approach to active and healthy aging.

9:20 AM — Talk 2

Through the Jury's Eyes: The Power of Face Recognition Evidence

Claire Sanford & William Blake Erickson

Texas A&M University – San Antonio

Technological advancements, like most new things, can be viewed with scrutiny upon first interaction, especially until it becomes more common. This study explored how facial recognition technology (FRT) evidence affects jurors' perceptions of guilt. With the increasing use of FRT in criminal investigations, it is essential to gauge how it compares to other types of evidence used in a courtroom. Our participants were recruited from Texas A&M University – San Antonio and were be asked to read a criminal trial transcript where the primary evidence involves either a human eyewitness, FRT, or non-facial physical evidence. Then they decided on a guilty or not guilty verdict and completed surveys on trust in technology and demographic variables. The study aimed to assess the influence of FRT evidence on legal decision-making and how one's ability to trust technology may influence their verdict.

9:40 AM — Talk 3

Reality Monitoring in Monolinguals and Bilinguals
Renee M. Penalver, Wendy S. Francis, & Bianca V. Gurrola
University of Texas at El Paso

Our previous research showed that external source monitoring was more accurate in bilingual than monolingual speakers and that accuracy did not depend on language proficiency (Francis et al., 2019). We tested whether this advantage might extend to reality monitoring. In Experiment 1, Spanish-English bilinguals and English monolinguals viewed a sequence of pictures and were cued to name them or only think about the name. At test, the pictures were presented again, and participants were to whether they had named them or only thought about the name. Reality monitoring accuracy was higher for low- than for high-frequency words, but performance was near ceiling, making it difficult to detect group differences. In Experiment 2, to make the task more difficult, cues to speak the word or only think of the name were given after each picture was removed from the screen. On this task, reality monitoring was indeed less accurate overall and was again more accurate for low- than for high-frequency words. Spanish-English bilinguals exhibited more accurate reality monitoring than English monolinguals, but there were no effects of bilingual proficiency or dominance.

11:20 AM — Talk 1

Performance in working memory updating task: stimulus domain and difficulty level differences

Francisco J. Sierra, Jennifer Dodgen, Christopher Elliott, Amrik Mohanty, Santosh Kolluri, & Chandramallika Basak

University of Dallas

This study examines how working memory (WM) operates when individuals must track different types of information (verbal versus visual) when the task is unpredictable (Basak & O'Connell, 2016) and increases in level of difficulty (Basak & Zelinski, 2013). Participants (N = 33, Mean age = 20.3, SD = 2.07, 25 females and 8 males) completed a WM updating task in which the item location changed randomly, requiring them to shift their attention constantly. The stimuli encompassed the verbal and visual domains presented at different difficulty levels. There were significant differences in accuracy between different domains (F (1, 2756) = 16.98, p < .01), and difficulty levels (F (2, 2756) = 263.38, p < .01), and a significant interaction between domain and difficulty level (F (2, 2756) = 3.52, p < .05). There were also significant differences in reaction time between the two domains (F (1, 2756) = 4.32, p < .05), and three difficulty levels (F (2, 2756) = 737.83, p < .01), but no significant interaction between domain and difficulty level. Overall, participants responded faster to verbal stimuli compared to visual, regardless of the difficulty level, suggesting that information type and task complexity can influence WM performance.

11:40 — Talk 2

Syntax Always, Syntax Sometimes: EEG Evidence from Healthy Listeners & Individuals with Post-stroke Aphasia

M. Blake Rafferty

New Mexico State University

The human brain continuously tracks the structure of sentences, yet the extent to which this supports comprehension varies with context. Using EEG, my work shows that healthy listeners enhance syntactic tracking when meaning cannot be readily derived from individual words—for example, in nonsense sentences that adhere to predictable patterns or in sentences where argument roles are ambiguous. In individuals with post-stroke aphasia, syntactic structure is tracked even

more strongly than in healthy controls, but this automatic processing does not reliably support comprehension; rather, success depends on their ability to flexibly integrate syntactic information. Across participants, predictable lexical content facilitates syntactic encoding, whereas ambiguity increases its importance. These findings indicate that syntactic processing is a constant feature of language comprehension, but its functional contribution is conditional: the brain selectively allocates resources to syntax when other cues are insufficient.

12:00 PM — Talk 3

Processing of and Memory for Metaphors and Other Literary Text Features
William H. Levine
University of Arkansas

Two sets of studies were conducted to examine verbatim memory of literary text features. In three experiments, college-student participants (n = 224 in total) read short experimenter-generated texts that ended in a sentence (e.g., 'The flower flourished.') that could be interpreted as a metaphor or literally, depending on prior context. Reading time was consistently longer on metaphoric versions of these sentences, and there was some evidence that memory for the metaphoric versions was better when a short delay was imposed between reading and a recognition memory test. In another study, college-student participants (n = 107) read an award-winning, anthologized short story. Following reading, participants completed a recognition memory test for literary and descriptive story phrases. Memory was better for literary than for descriptive phrases in the story. These studies and their results will be discussed within a framework proposed by Miall and Kuiken (1994, Poetics) that posits that the allocation of attention to different features (e.g., surface, meaning) of language is driven in part by the presence of literary and stylistic features.

POSTER SESSION II

Poster #1

Hispanic Stereotypes, Weapon Focus, and Eyewitness Memory

Briana Aguilar

Texas A&M University – San Antonio

The current study investigates the effects of weapon presence and perpetrator race on line-up task performance and the influence of stereotypical beliefs and cultural values around gun ownership. Participants viewed a crime video featuring either a Non-White Latino or a White perpetrator brandishing either a gun or plastic bottle and wearing stereotypic (e.g., baggy pants, flannel shirt) or non-stereotypic (e.g., polo shirt, khakis) clothing. They were then presented target-absent or target-present lineup and answered questions about beliefs in stereotypes and association with Gun culture. Some clothing x object were found such that White targets holding water while wearing stereotypic clothing were identified less often than if they were wearing non-stereotypic clothing, although other differences were non-significant. Gun values did not covary significantly with other variables.

Poster #2

Enhancing Dyslexia Diagnosis using Pseudoword Mask Assessment

Lauren Kahn & Joseph Houpt

University of Texas at San Antonio

Dyslexia is a neurodevelopmental disorder that affects an individual's ability to read, spell, and process phonological information. Traditionally, dyslexia is diagnosed through assessments focused on phonological deficits, such as difficulties in manipulating sounds within words. This approach may not fully capture the complexity of dyslexia, which can affect a range of cognitive and sensory processes including deficits in including both visual and auditory processing. We hypothesized that integrating visual and auditory stimuli in diagnostic tasks would provide a better understanding of dyslexia. Specifically, we used a pseudoword identification task to test if: (1) dyslexic individuals perform better in the visual or auditory modality; (2) combining visual and auditory stimuli would improve performance in dyslexic individuals, bringing their performance closer to non-dyslexic controls; and (3) across all conditions, dyslexic participants would show slower response times and lower accuracy compared to non-dyslexic participants. Participants

completed a pseudoword matching task under three conditions: visual-only, auditory-only, and a combined visual-auditory condition. In the non-dyslexic group response times were faster in the auditory condition than the visual condition. Accuracy was highest in the combined condition. Preliminary data from dyslexic participants indicated slower response times and lower accuracy in both visual-only and auditory-only conditions. However, their performance improved in the combined condition, suggesting that integrating multiple sensory modalities may help mitigate dyslexia-related deficits. These findings support using multimodal tasks to better capture dyslexia's complexity.

Poster #3

The Role of Language Control on Structural Representation in Bilinguals
Anahy Barragan-Diaz
University of Texas at El Paso

In daily life, bilinguals sometimes speak each of their languages in situations where the other language cannot be understood (e.g., English with an English monolingual co-worker, or Spanish with a Spanish monolingual family member). To avoid saying words in the wrong language in such situations, bilinguals inhibit lexical representations from the non-target language (Green, 1998). But do they inhibit structural representations? English-dominant Spanish-English bilinguals described pictures in English (Phase 1), then in either Spanish or English across participants (Phase 2), and again in English (Phase 3). We focused on the English dative alternation, because the surface form of one of its variants - double objects - is not shared with Spanish. If structural inhibition exists, speaking Spanish in Phase 2 should inhibit English double objects, which should subsequently be slower to access when needed in Phase 3 (as numerous studies show happens for single words, e.g., Costa & Santesteban, 2004) – and hence be used less often than in Phase 1. In Experiment 1 (N = 108), Phase 2 consisted of monotransitives, to test if English double objects would be inhibited by producing any Spanish structure (language-wide inhibition). In Experiment 2 (N = 93), Phase 2 consisted of ditransitives, which in Spanish can only be expressed with prepositional datives, to test structure-specific inhibition. Neither experiment showed the predicted effect: Double object production after speaking Spanish did not decrease more than double object production after speaking English. This result does not support the existence of structural

inhibition in bilinguals. In an ongoing follow-up study, we are further testing this hypothesis looking at naming latencies for picture descriptions in both a blocked and mixed design.

Poster #4

Deconstructed Remote Associate Word Problems: Exploring Cue Order and Association Strength Effects on the aha! Experience

Matthew Kidd

Texas A&M University

Insight problems such as the Compound Remote Associates (CRA) putatively evoke aha! moments because of the remote association between problem cues and solutions. However, our previous research has demonstrated that the direction of association (i.e., forward or backward) yields distinct results regarding aha! frequency. To investigate this hypothesis, CRA problems were modified to have only two cues with a staggered presentation (i.e., 1st cue presented alone, then both cues together). The cue order was reversed between subjects to examine cue order effects and the role of bidirectional association strength. 70 participants (with 35 in each counterbalance) completed 12 deconstructed CRA problems and 12 Polysemous Associate Test (PAT) problems. The results revealed that Aha! frequency is highest with a strong cue 1 forward association and a weak cue 2 backward association, compared to the counterbalanced condition and to control problems with weak overall associations. This research also validates a novel methodology for studying aha! moments with greater precision and control.

Poster #5

Metacognitive Evidence of Insight Moments during Categorized Memory Retrieval

Morgan S. Paladino, Visheeta J. Chandolia, Matthew A. Kidd, & Steven M. Smith

Texas A&M University

Do people experience aha moments when recalling categorized lists? In our previous work, participants reported aha moments in contexts such as problem-solving, idea generation, and resolving tip-of-the-tongue states. Here, we asked whether episodic memory retrieval would similarly evoke aha moments. Participants encoded four lists, each with several categories and members of those categories, and we asked participants to rank how well each member fit its respective category. Then, participants recalled as many category members as they could, one list

at a time. We predicted that people would report more aha moments when a recalled word was from a different category than the previous response. We found more aha moments upon switching to a different category versus continuing to unpack the same category. Our findings suggest that aha moments are more prevalent during a shift from schema-driven controlled retrieval to more automatic retrieval processes.

Poster #6

Exploring Links Between Parent–Infant Facial Expression Synchrony and Early Autism Risk Markers

Aaminah Shamoon, Dr. Hanako Yoshida, Elizabeth Perkovich, & Sara Paredes

University of Houston

Facial expression synchrony—the temporal and emotional alignment of facial expressions between interaction partners—is a foundational component of early social development [1]. Differences in facial expression synchrony are often observed in children with autism and may emerge well before a formal diagnosis, which typically occurs around two years of age [1–2]. This study leverages head-mounted eye-tracking technology to examine facial expression synchrony between neurotypical infants and infants with a family history of autism (FH+) between 6 and 14 months, a critical window when early nonverbal social markers emerge [2]. During naturalistic parent–infant play sessions, synchronized recordings of gaze and facial expressions are collected to quantify moment-by-moment alignment. Our aims are twofold: (1) to characterize group differences in synchrony patterns during naturalistic play, and (2) to examine whether individual differences in synchrony are associated with infant ESAT scores (early behavioral markers) and parental BAPQ scores (subclinical autistic traits that may shape the interactive environment). Analyses are ongoing and expected to be completed by Fall 2025. Findings will provide insight into how infant and parent-level traits contribute to variation in dyadic social communication, with implications for early detection and the development of parent-mediated interventions [3].

Poster #7

Multi-perpetrators Influence on Eyewitness Identification Discriminability and Confidence

Alyssa Allen & Alyssa R. Jones

Tarleton State University

Eyewitness misidentification is a leading cause of wrongful convictions, yet most research in this area has focused on single-perpetrator crimes. In real-world contexts, however, crimes involving multiple perpetrators are common, with nearly 20% of homicides in the U.S. involving two or more offenders (Cooper & Smith, 2011). The presence of multiple perpetrators may place added demands on eyewitnesses' memory and face processing, potentially reducing their ability to accurately discriminate between guilty and innocent suspects.

The proposed study will be the first to examine how perpetrator similarity (similar vs. dissimilar appearing individuals) affects eyewitness identification accuracy and confidence when two perpetrators are encoded during a mock-crime. Specifically, we ask:

1.   Does the presence of similar-looking perpetrators impair discriminability (i.e., eyewitnesses' ability to discriminate between guilty and innocent suspects) relative to dissimilar perpetrators?

2.   Does the well-established confidence–accuracy (CA) relationship remain robust when witnesses attempt to identify multiple perpetrators (Wells & Wixted, 2017)?

In the second experiment, we may use a video showing one of the perpetrators holding an unusual object. We would like to determine if the object will drive attention and encoding of the face for the perpetrator holding it. If we run a second experiment, it will follow the same design and procedure.

Poster #8

AI Literacy

Viancka McLenan & Joseph Houpt

University of Texas at San Antonio

A wide range of employers have expressed the importance of AI knowledge for the future workforce. In response to this demand higher education is increasingly building AI content into the curriculum. The goal of this study is to examine the current state of undergraduate student preparedness and literacy using validated AI questionnaires. This data will form the foundation for

understanding the current needs and the effectiveness of curriculum changes over the next few years. We are particularly interested in the extent to which students believe they can learn AI, and how competent they believe themselves to be with AI. Given that previous studies focused on a different population, our goal was also validating two different measures of AI literacy on our student body. Our results generally mirrored previous results: Questions that were previously related to self-competency and self-efficacy showed similar correlation patterns in our data. However, there were some clear deviations in our data set, for example our problem-solving section under self-efficacy did not reach the statistical significance that previous research had provided nor did persuasion literacy under self-competency. This could be due to instability in constructs or a potential window into the relationship of AI education and cultural context.

Poster #9

Do Bilingual Language Switching Patterns Shape Memory for Topics and Speakers?
Andri J. Cruz, Wendy S. Francis, & Iva M. Ivanova
University of Texas at El Paso

Bilinguals regularly adjust how they use and interpret spoken language depending on different conversational contexts. Prior research suggests that when processing spoken language, dense code-switching contexts (switching languages within sentences) are more cognitively demanding than dual-language contexts (switching languages between speakers). This study examines the consequences of these cognitive demands in episodic memory for topics and speakers in observed conversations. Spanish-English bilingual participants (N = 72; M = 22, F = 48) watched videos of conversations in dual-language and dense code-switching contexts and then completed memory tests about what was said and who said it. Bilingual proficiency and experience were assessed via standardized measures and comprehensive questionnaires. We hypothesized that greater cognitive effort in dense code-switching contexts would result in lower memory accuracy. We also expected greater exposure to this conversational style to reduce the memory disadvantage. Preliminary results showed that 78% of participants in the dual-language conditions correctly identified presented video stimulus compared to 82% in the dense code-switching condition, suggesting that dense code-switching may not always impose a memory disadvantage. Instead, bilinguals' familiarity with flexible language use could confer benefits in remembering conversational

information. Ongoing analyses will examine how individual differences in bilingual experience shape these outcomes.

Poster #10

Voice and Language Specificity of Bilingual Speech Perception
Andy Huynh, Melinda Fricke, & Ana Schwartz

University of Texas at El Paso

Voice familiarity has a powerful effect on speech comprehension, improving both intelligibility and recall. The present ongoing study aimed to test the hypothesis that the benefits of voice familiarity for bilinguals depend on the consistency between a familiarized voice and the language of production, with improved perception for words when speakers produce the same language versus a different language. Proficient Spanish-English bilinguals performed a speech-in-noise transcription task. During a familiarization phase, participants listened to brief utterances in both English and Spanish that were either produced by the same voice or by a different voice. In the test phase, they listened to individual words presented in speech-shaped noise and typed the word they heard. The initial voice-language pairing was either kept consistent or inconsistent. Preliminary results show that transcription accuracy was significantly lower in the two-voice conditions when the language pairing was swapped relative to when it was kept consistent.

Poster #11

Discourse Updating Across Languages
Vanessa Vilchez & Ana Schwartz

University of Texas at El Paso

Comprehending discourse requires updating the ongoing representation. We examine how updating is affected by a change in language. Highly-proficient Spanish-English bilinguals read narratives divided in two halves and answered true/false statements while their eye-movements were recorded. Each narrative introduces a character and two traits one of which is later modified. Narratives concluded with a behavior that is inconsistent with the initial version of the trait. The first half of the narrative was either in the same or different language as the second half. Half of the true/false statements were in Spanish and half in English. We expect reading times for the inconsistent behavior and key words in the true/false statements to reflect a cost due to automatic

activation of the initial trait which will be attenuated when there is a language switch. Aspects of the eye-movement record reflecting conscious-driven updating processes will reflect a greater cost for language-switched texts.

Poster #12

Beta Bursts and Inhibitory Control in Bilingual Speech Perception
Valeria Yu, Ana Happle Albornoz, Andrew Bowers, & M. Blake Rafferty
New Mexico State University

Codeswitching is a phenomenon wherein bilingual individuals strategically alternate between languages when speaking. While primarily researched as an element of production, the ability to efficiently process code-switching is an important component of speech perception for bilingual listeners. Little is currently known about the neural dynamics that support successful perception of code-switched speech. In single language speech, the speech motor control system facilitates perception through feedforward predictions that inhibit unlikely auditory-phonological representations and prime the auditory system for expected input. In this to-be-completed work, we investigate the role of inhibitory control in dual-language speech perception for bilingual listeners. Towards this end, we recorded 64-channel electroencephalography (EEG) while highly proficient Spanish-English bilinguals (current n = 17; target n = 25) listened to 3 short passages with embedded with codeswitches. We will extract sensorimotor beta bursts—a key neural index of inhibitory control—and compare codeswitched vs. non-codeswitched words. We will additionally relate the strength of inhibitory response to participants' code-switching experience. We hypothesize that less frequent code-switchers may evidence stronger inhibitory responses, indicating greater effort to switch between languages. Alternatively, enhanced inhibitory control may be facilitatory, allowing for more efficient language switching.

Poster #13

Disentangling Concept from Context: a factorial manipulation of semantic judgements using familiar concepts
Faith J. Coleman & Christopher Cox
Louisiana State University

Executive function and semantic memory have been studied extensively, but little is known about how they interact to support controlled semantic cognition. Among the computational cognitive model architectures that have been explored, those that are best at acquiring contextualized knowledge have 1) a trans-modal hub sheltered from contextual information and 2) an area dedicated to contextualizing information retrieved from the hub. This implies that both contextualized and generalized semantic structures should be present in different parts of the brain during tasks that involve semantic control. However, there has never been a study designed to test this. We identified a set of concepts that each support the same three semantic judgments: is it 1) a living thing, 2) possible to fit in a zipped carry-on suitcase, and 3) more dangerous than a wasp? By iteratively acquiring domain, size, and danger feature verification judgments for an evolving pool of candidate concepts, we discovered 32 concepts with >80% agreement on all three judgments and support a 2 (living/nonliving) x 2 (big/small) x 2 (safe/dangerous) balanced factorial design. This is the first stimulus set of its kind and will be invaluable for probing the neurocognitive architecture of controlled semantic cognition.

Poster #14

Vicarious defeat stress impairs spatial memory performance in female adolescent c57BL/6 mice

Anapaula Themann & Sergio D. Iñiguez

University of Texas at El Paso

Exposure to psychological stress has been shown to increase the incidence of major depressive disorder, primarily in juvenile populations. Recently, our lab has established the vicarious defeat stress (VDS) paradigm for the study of psychological stress-induced depression-related behavior in vulnerable populations such as adolescents and females. Thus, the goal of this study was to examine whether exposure to VDS, specifically in adolescent female mice, resulted in an impairment of spatial memory performance on a standard Morris water maze (MWM) task. Here, on postnatal day (PD)35 adolescent female mice witnessed the defeat bout of a male conspecific by a CD-1 male aggressor for 10 minutes across 10 consecutive days. Forty-eight hours after, mice were tested on spatial memory performance on the MWM (PD46-57). We found that adolescent female mice, independent of stress exposure, learned to find the location of the escape platform across the training trials. However, 24 hours after training, female mice exposed to VDS displayed

increases in the latency to locate the escape platform, indicating impairment of spatial memory. Collectively, this preclinical study uncovered that VDS, in adolescent female mice, results in memory impairment, one of the key phenotypes exhibited by individuals suffering from major depression.

Poster #15

Using General Recognition Theory to test Auditory Signals for Aircraft Landing Sequence

Lemira Esparza & Joseph Houpt

University of Texas at San Antonio

Pilots rely visual information from either the runway or from indicators on the primary flight display to successfully land an aircraft on a runway, which can be compromised by unexpected events (e.g. laser pointers aimed at the plane from the ground). These disruptions can have devastating results if occurring during a landing sequence, particularly towards the end of the landing sequence. The current practice is to abort the landing sequence followed by another attempt; however, subsequent attempt(s) can be costly and are not guaranteed success. The long-term goal of the current research study is to incorporate auditory guidance as part of a multimodal navigation system that would complement visual displays to compensate for visual disruptions during a landing sequence. We previously pilot tested potential auditory signals to incorporate into the multimodal navigation system and found up to 6% mean error rate when prompted to report direction of intended navigation as indicated by auditory signals. Due to the limitations of mean accuracy, our current proposed study will use General Recognition Theory (GRT), a more advanced perceptual model, to further assess perception of the auditory signals when paired with visual display in two separate experiments (Experiment 1: vertical guidance; Experiment 2: horizontal guidance). For vertical guidance, auditory signals will either present two tones sequential or one tone with pitch modulation (between-subject) to indicate upward or downward adjustment. For horizontal guidance, left and right headphone presentation will indicate left and right direction adjustments. Both experiments will use the same visual display currently used by pilots for vertical and horizontal guidance. Each experiment will consist of four auditory/visual stimuli (Exp. 1: up/up, up/down, down/up, down/down; Exp. 2: left/left, left/right, right/left, right/right) with four response options of perceived auditory/visual combination. We anticipate that congruent auditory/visual signals (Exp. 1: up/up, down/down; Exp. 2: left/left, right/right) will

violate perceptual independence, while incongruent signals (Exp. 1: up/down, down/up; Exp. 2: left/right, right/left) would not. A violation of perceptual independence for congruent but not incongruent signals would indicate a unified perception of adjustment direction. The strength of perceptual dependence will be used to evaluate the effectiveness of each of the two tone presentations.

Poster #16

Investigating the Own-Race Face Recognition Bias Utilizing an Attentional-Based Paradigm

Madison Sinha

Sam Houston State University

The own-race bias (ORB) refers to the face recognition bias that occurs when individuals recognize faces of their own race more accurately than other-race faces (Meissner & Brigham, 2001). ORB is typically investigated as strictly a memory-based phenomenon, but there are theories that have discussed attention-based mechanisms that influence the ORB (Rodin, 1987; Sporer, 2001). Change blindness paradigms have been used to evaluate attention-based phenomena that occur when individuals fail to notice visual changes within a scene (Rensink et al., 1997; Simons & Levin, 1997). We utilized the change blindness paradigm to examine if attentional-based processing plays a role in the own-race bias. Participants will be shown a series of videos that have a change in an object, person, or no change. For the person change videos, either an own-race or other-race individual is changed. Following each video, participants will be asked to identify any change in the video. We predict that participants will notice the person change more often when the changed person is of their own race. The object change and no change videos will provide us with baseline measures for change detection. Testing is currently ongoing, but we will be providing at least preliminary data.

Poster #17

How older adults' perceptions of aging and technology self-efficacy influence their digital social networks

Yessenia D. Lopez, Genessis Aguirre, Miyah Ray-Morales, Christian Ruiz-Ortiz, & Ashley S. Bangert

University of Texas at El Paso

Older adults experience a number of social and lifestyle changes that can lead to reductions in their social networks and, as a consequence, social isolation. Technology has the capability to connect individuals with mobility or accessibility challenges to their communities. However, both the generational digital divide and negative perceptions of aging may hinder older adults' willingness or ability to learn and adopt technologies designed to enhance their social engagement. In the current study, we collected survey data from 71 older adults participating in technology courses through El Paso Community College's Senior Adult Program about their experience with and perspectives on modern technology. We also asked about their in-person and digital social networks, their views of aging, and their self-efficacy ratings related to learning new technology. We will present results comparing the size and quality of their reported in-person and digital social networks. In addition, we report on whether technology self-efficacy and views of aging predict the size and quality of their reported digital social networks to better understand how their own views of their capabilities and their feelings about aging may influence their willingness to use technology tools to stay connected with their families and communities.

Poster #18

Using Illusions of Auditory Motion to Locate and Interact with Moving Sounds

Alicia D. Torres, Lemira V. Esparza, & Edward J. Golob

University of Texas at San Antonio

Auditory motion creates displacement illusions that distort the perception of sound location to be perceived ahead (representational momentum: RM) or behind (representational lag: RL) the true location. Researchers theorize that RM compensates for the delay from transmitting information from sensory receptors to the brain. We further hypothesized that motor responses to a perceived sound would also impose a delay, via motor output from the brain to effectors. We hypothesized that if displacement illusions compensate for processing delays, then the magnitude of forward

displacement would be greater when responding to moving sounds vs. perception of the same sounds. Participants (n=31) heard lateral sounds traveling towards midline that varied velocity (20°/s, 40°/s) and direction (clockwise, counter-clockwise). In two conditions, participants either pressed a button to stop the sound at perceived midline (motor condition) or judged (left/right) the perceived offset location relative to midline (perceptual). We predicted that forward displacements, indicating RM, would be larger in the motor vs perceptual condition. The results revealed a three-way interaction among tasks, velocity, and direction. Forward displacements were greater in the motor compared to the perceptual condition for clockwise motion at both velocities; however, this interaction was statistically significant at 20°/s but trending at 40°/s. Thus, our hypothesis was partially supported, only for clockwise direction, revealing an unclear directional difference in motor vs perceptual responses.

Poster #19

Vicarious defeat stress impairs spatial memory performance in male adolescent c57BL/6 mice

Christopher A. Frausto & Sergio D. Iñiguez
University of Texas at El Paso

Psychological stress exposure is a prevailing risk factor for the development of mood-related illnesses. Despite the growing literature indicating that affective disorders can arise after a traumatic event is vicariously experienced, this relationship remains to be thoroughly examined in juveniles at the preclinical level. Thus, the objective of the current investigation is to assess whether the vicarious defeat stress paradigm – a model that dissociates psychological versus physical stress – induces a depression-like phenotype in adolescent male and female mice. Adolescent (5-week-old) male c57BL/6 mice witnessed the social defeat bout of a male conspecific, by a larger CD1 aggressor, for 10 consecutive days. Twenty-four hours after the last stress exposure (postnatal day 45), separate groups of mice were tested in the social interaction or Morris water maze. When compared to same-sex non-stressed controls, male mice exposed to vicarious defeat stress exhibited a depressive-like phenotype, as inferred from decreases in social behavior and spatial memory deficits. Collectively, our data suggest that the vicarious defeat stress paradigm may be used to examine the etiology of psychological stress-induced mood-related phenotypes in the juvenile population.

Poster #20

Long-Term Encoding of Inferences in Bilinguals

Bianca V. Gurrola & Wendy S. Francis

University of Texas at El Paso

Schemas for everyday activities (e.g., grocery shopping) can facilitate communication. However, schemas can also lead us to infer details that are not explicitly stated, resulting in a type of false memory. The present study investigated the encoding of non-presented inferences in bilingual long-term memory. Specifically, we tested whether the tendency to confuse presented and inferred information would vary as a function of language proficiency, presentation modality, and cognitive load. In Experiment 1, 64 Spanish-English bilinguals read and listened to narratives created from common schemas (e.g., dentist appointment, taking a flight, etc.). After a filled 5-minute retention interval, they completed a recognition test for each of the narratives. In Experiment 2, 64 Spanish-English bilinguals listened to narratives under a cognitive load (1-back task) or no load. After the retention interval, they completed a recognition test for each narrative. Discrimination between presented information and non-presented inferences was compared across languages, presentation modalities, and levels of cognitive load.

Poster #21

Fluency and Code-Switching Patterns in Bilingual Adults With and Without ADHD

Angelica S. Vasquez & Iva Ivanova

University of Texas at El Paso

Adults with attention-deficit/hyperactivity disorder (ADHD) often show speech disfluencies at the discourse level, such as pauses, repetitions, and filler words, reflecting attentional and language-planning challenges (Engelhardt, Ferreira, & Nigg, 2011; Evans & Owens, 2019). However, how ADHD affects bilingual fluency and code-switching is largely unexplored, even though code-switching is a common phenomenon among bilinguals (Kašćelan & Parafita Couto, 2024). Therefore, bilingual adults with ADHD may face unique communication challenges that are unidentified in the current literature. This study aims to characterize speech patterns in Spanish-English bilingual adults with and without ADHD and examine how attentional differences impact discourse-level speech. Participants will describe short comics to elicit connected speech, and complete a brief questionnaire to help distinguish attentional profiles in participants with and

without a formal ADHD diagnosis. Voice recordings will be transcribed and analyzed for disfluency rates (e.g., filled and unfilled pauses, repetitions) and code-switching behavior (frequency, type, and context). We hypothesize that adults with ADHD will show increased disfluency compared to controls, reflecting strategies to manage cognitive demands during speech production.By addressing this gap in the literature, this research will provide evidence on how attentional differences interact with bilingualism and inform future studies on speech and language control in bilingual populations.

Poster #22

How Long Will It Take?: Assessing What Characteristics of our Everyday Experiences Influence What We remember About Their Duration

Tovah Valles, Caitlin Robinson, Esmeralda Castaneda, & Ashley S. Bangert

University of Texas at El Paso

People naturally segment everyday activities into meaningful spatiotemporal units. For example, making breakfast might be segmented into making coffee, scrambling eggs, making toast, etc. Past research has gathered normative data about what people know about the component steps involved in familiar activities, such as visiting the dentist or shopping for groceries. However, it is unclear to what degree people also encode information about the expected duration of these activities and their sub-events into long-term memory. People may develop expectations about the expected length of particular activities and be sensitive to violations of these expectations (e.g. this is taking too long!). In the current study, we will gather updated normative data about familiar activities experienced by college students. Students will be asked to generate the sub steps for these activities and their estimated durations. They will also provide ratings of other characteristics of these steps, including their centrality, distinctiveness, and familiarity. We plan to report preliminary data on what duration information is stored about these activities and their steps and what characteristics influence the consistency of these duration judgments across participants. This knowledge will clarify how and for what types of activities duration information is encoded into long term memory.

Poster #23

Parental Broader Autism Phenotype Traits and Infant Attention Development: A Naturalistic Study of Early Cognitive Engagement

Ruchi Patel, Elizabeth Perkovich, & Hanako Yoshida

University of Houston

Infant sustained attention (SA)—the ability to maintain focus on objects or events—is a fundamental component of early cognitive and social development [1]. SA development emerges within the context of early parent–child interactions, and one potential contributor is the parent's behavioral profile [2]. The Broader Autism Phenotype (BAP) encompasses subclinical traits related to autism, such as aloofness, rigidity, and pragmatic language differences [3]. Although elevated BAP traits have been linked to reduced attention behaviors in adults [4], little is known about their influence on infant SA in naturalistic contexts. This study examined associations between parental BAP traits and infant SA during parent–infant play. Thirty-six parent–infant dyads (M = 9.17 months, SD = 3.01) participated in a six-minute naturalistic play session while wearing head-mounted eye-trackers. Infant SA was operationalized as look durations exceeding 1000 milliseconds. Parents completed the Broad Autism Phenotype Questionnaire (BAPQ) [5]. Analyses showed that higher parental BAP scores were associated with shorter durations of infant sustained attention, with this association weakening as infants grew older. These findings point to meaningful links between parental characteristics—even those not reaching clinical thresholds—and infant attention experiences that are critical for early learning, underscoring the importance of considering how these associations evolve with age.

Poster #24

AR'nt you listening? Intonation: an inaudible tone that "normies" hallucinate

Kevin Moreno, Natasha Rovelli, Christian Dees, Andri Jennette "AJ" Cruz, Christoph Lauter, Bruce Friedman, & Eric Freudenthal

University of Texas at El Paso

We observe that (1) vocal Intonation is barely audible in the absence of the missing fundamental illusion (MFI) and (2) an unobtrusive acoustic augmented reality (AR) process that isolates, delays, and boosts the loudness of intonation in voice appears to create a similar perceptual experience to the MFI and suppresses speech communication impediments stereotypical of

people with autistic neurotypes. This poster describes (1) the AR process, (2) novel metrics for characterizing intonation perception, (3) anecdotal observations of behavioral and cognitive effects, and (4) in-progress and planned experiments to validate and better characterize these observations.