

FRIDAY

inhibition groups. However, neither of the groups showed generalized training effects on either structurally different tasks related to the trained abilities, or the tasks tapping untrained abilities. Nonetheless, observed gains in trained tasks remained stable after 6 months.

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6:00-7:30 PM (3041)

Relationship Between Aging and EEG Microstate Dynamics: Transition Dynamics Considering Topographic Polarity. SHIHO KASHIHARA, *Advanced Telecommunications Research Institute International*, TOMOHISA ASAI, *Advanced Telecommunications Research Institute International*, HIROSHI IMAMIZU, *Advanced Telecommunications Research Institute International and University of Tokyo* — Spontaneous electrical neural activity recorded at rest is thought to reflect large-scale brain dynamics and has been implicated in various cognitive functions, mental states, and individual characteristics. One example is the effect of aging; it has been suggested to be related to the EEG microstates (EEGms) features of resting-state EEG as one of the psychophysiological indices of age-related functional decline. EEGms are characteristic topographic patterns and have recently attracted renewed interest in describing brain spatiotemporal dynamics. In this study, we examined the age-related differences in resting-state electrical neural activity between young and elderly adults, considering the polarity of EEGms and their location on the manifold space, to understand EEGms dynamics as more continuous transitions. The results showed that transitions between specific states labeled msC, D, and E in EEGms studies were less frequent in the elderly group than in the young group.

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6:00-7:30 PM (3042)

Age, Ability, Expectations: Uncovering the Intricacies in Working Memory Training Gains. ANDREA VRANIC, *University of Zagreb*, MARINA MARTINCEVIC, *University of Zagreb*, LUKA JURAS, *University of Zagreb* (Sponsored by Andrea Vranic) — Working memory training gains vary greatly, speculatively due to differences in cognitive and motivational characteristics. Magnification and compensation accounts have been proposed to explain, respectively larger or smaller training benefits. We aimed to investigate WM updating training gains, operationalized as average task difficulty across training sessions, with regard to baseline ability, age and expectations regarding the efficacy. A sample of 24 young and 38 middle-aged adults participated in the 20 adaptive n-back training sessions (over 10 weeks). The results of two multilevel model analyses indicated that linear and nonlinear functions can describe changes during training. Overall, a growth mindset did not predict training gains. Notably, the magnification hypothesis was supported only in young adults, as higher baseline performance was associated with greater gains. Baseline performance was not a significant predictor in middle-aged adults. These findings underscore the importance of age-related differences in cognitive abilities when designing updating training.

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6:00-7:30 PM (3043)

Theory of Mind Predicted by Fluid and Crystallized Intelligence: A Lifespan Approach. SARA GORING, *Claremont Graduate University*, ESTER NAVARRO, *St. John's University* — Theory of mind (ToM) is the ability to infer other's perspective from the social and environmental information that is available. ToM develops early in adolescence (e.g., Schurz et al., 2014; Wellman, Cross, and Watson, 2001), and there is evidence it diminishes into older adulthood compared to young adults (Charlton et al., 2009; Wang & Su, 2013). However, research is needed to understand how this ability changes across the lifespan. With 206 adults ranging from 25 to 69 years old, the continuous age variable was looked at in conjunction with composite variables for fluid intelligence, crystallized intelligence, and ToM. Results indicated there was a trade-off between crystallized intelligence and fluid intelligence for predicting ToM performance. Furthermore, controlling for age-related variability increased the effects of the other cognitive abilities on ToM. Overall, using a lifespan approach to ToM provides more insight into understanding the role of age-related cognitive changes in this ability.

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6:00-7:30 PM (3044)

A Within-Subjects Comparison Dissociating Proactive and Reactive Control in Younger, Middle-Aged, and Older Adults. MERVE ILERI-TAYAR, *Washington University in St. Louis*, JULIE BUGG, *Washington University in St. Louis*, TODD BRAVER, *Washington University in St. Louis* — The Dual Mechanisms of Control (DMC) framework postulates two modes of cognitive control: proactive (anticipatory active maintenance of task goal information) and reactive (transient stimulus- or conflict-triggered reactivation of task goals). Prior work has utilized tasks such as the AX-CPT or Stroop to demonstrate that proactive control may be selectively vulnerable to age-related decline, while reactive control is preserved with increasing age. Here, we developed a novel online variant of the vocal color-word Stroop paradigm to provide the first test of this hypothesis within a single, large sample ($N > 300$), within-subject design. Younger adults (aged 18-32) exhibited rigorous evidence of distinctive markers for both proactive (list-wide proportion congruence, congruency cost) and reactive control (item-specific proportion congruence, transfer cost). Although older adults (aged 60+) had markers of intact reactive control, evidence of proactive control was absent, while middle-aged adults (aged 33-59) exhibited an intermediate pattern. These results highlight the theoretical power of the DMC framework, as well as the utility of this new Stroop paradigm, for investigating age-related changes in cognitive control function.

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6:00-7:30 PM (3045)

Spontaneous Thoughts and Memory Lingering in Older Adults: An Effect of Inhibition? KESAN KANDASAMY, *Toronto Metropolitan University*, LIXIA YANG, *Toronto Metropolitan University* — Emerging studies have shown that spontaneous thoughts are susceptible to environmental influences. Using a free association paradigm, it was found that young adults generated