

Abstracts of the Psychonomic Society

Volume 21 • November 2016

57TH ANNUAL MEETING

Sheraton Boston Hotel
Boston, Massachusetts
Thursday, November 17-Sunday, November 20, 2016

REGISTRATION

Grand Ballroom Foyer, Sheraton Boston Hotel
Thursday, November 17 10:00 a.m.-8:00 p.m.
Friday, November 18..... 7:30 a.m.-6:00 p.m.
Saturday, November 19..... 7:30 a.m.-5:00 p.m.

OPENING SESSION/KEYNOTE ADDRESS

Grand Ballroom, Sheraton Boston Hotel
Thursday, November 17 8:00 p.m.-9:30 p.m.

- **Psychonomic Society 2016 Early Career Awards**
- **Psychonomic Society/Women in Cognitive Science Travel and Networking Award for Junior Scientists**
- **Perception and Action in the Wild**
Roberta Klatzky, Carnegie Mellon University

SYMPOSIA

Grand Ballroom, Sheraton Boston
Friday, November 18..... 10:00 a.m.-12:05 p.m.
Model-Based Cognitive Neuroscience

Friday, November 18..... 1:30 p.m.-3:30 p.m.
Motivated Memory: Considering the Functional Role of Memory

Saturday, November 19... 10:00 a.m.-12:00 noon
Language by Mouth and by Hand

Saturday, November 19..... 1:30 p.m.-3:30 p.m.
The Evolutionary and Psychological Significance of Play
From the Psychonomic Society's Leading Edge Workshop initiative
In honor of Stanley J. Kuczaj, II

POSTER SESSIONS

Hynes Ballroom B, Hynes Convention Center

Session I

Thursday, November 17 6:00 p.m.-7:30 p.m.

Session II

Friday, November 18..... 12:00 noon-1:30 p.m.

Session III

Friday, November 18..... 6:00 p.m.-7:30 p.m.

Session IV

Saturday, November 19..... 12:00 noon-1:30 p.m.

Session V

Saturday, November 19..... 6:00 p.m.-7:30 p.m.

BUSINESS MEETING

Liberty Ballroom B, Sheraton Boston Hotel
Saturday, November 19..... 5:10 p.m.-6:00 p.m.

- **Presentation of the Psychonomic Society 2016 Clifford T. Morgan Best Article Awards**
- **Business of the Psychonomic Society**

FUTURE MEETINGS

2017 – Vancouver, BC – November 9-12
2018 – New Orleans, LA – November 15-18
2019 – Montréal, QC – November 14-17
2020 – Austin, TX – November 19-22
2021 – San Diego, CA – November 18-21
2022 – Washington, DC – November 17-20



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is through video game training. This study examined whether a particular component of EF, shifting, could be enhanced using a game specifically designed to require shifting skill. Participants completed a pretest of cognitive tasks assessing shifting, including the Dimensional Card Change Sort task (DCCS) and Letter-Number task (LN), played either a custom designed video game requiring shifting, *Alien Game*, or a control game, and then completed a post-test of the same cognitive tasks. Those who played *Alien Game* performed significantly better on the post-test LN task ($d = 0.84$), but not the DCCS ($d = 0.21$), than the control group. The results provided evidence for the theory of specific transfer of a general skill.

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(3238)

Learning to Mastery Criteria: Comparisons of Adaptive and Fixed Spacing in Chemistry and Geography. EVERETT METTLER, CHRISTINE MASSEY and PHILIP J. KELLMAN, *University of California, Los Angeles* — Spacing exerts powerful effects on learning. Most studies of spacing have used a small, fixed number of presentations of each item (e.g., 3 or 4). In recent research, we compared beneficial fixed spacing schemes to an adaptive system, ARTS (Adaptive Response-Time-Based Sequencing). ARTS automatically adjusts spacing based on ongoing learning strength, assessed from accuracy and response times. With a fixed number of presentations, ARTS produces greater learning gains than fixed schedules. In real learning settings, it is desirable to continue learning to mastery rather than a predefined number of trials. Here we report tests of ARTS and fixed spacing using mastery and drop-out criteria by learning item. Using geography facts, we compared ARTS to random schedules with and without drop-out. Using chemistry nomenclature items with community college chemistry learners, we compared ARTS to continuously-expanding schedules. We found greater learning efficiency in ARTS compared to all of the non-adaptive conditions. (The first author is an employee of Insight Learning Technology, Inc., which features the ARTS system in many of its products.)

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(3239)

Disentangling the Effects of Note-Taking Strategy: Generation and Summarization. LAKSHMI A. LALCHANDANI and ALICE F. HEALY, *University of Colorado Boulder* — Research on educational technology yields conflicting results in regards to learning impairment. Recent studies have shown that laptops, when used for note taking, can impair learning due to shallower processing than for longhand note taking. Computer note takers tend to use a verbatim note-taking strategy, whereas longhand note takers benefit from deeper encoding by using a generative note-taking strategy (summarizing). Generative note taking confounds generation and summarization effects. The goals of two experiments were to replicate and extend previous findings regarding note-taking media and to disentangle generation and summarization effects. Experiment 1 manipulated the presence of PowerPoint slides and reproduced previous findings for an immediate posttest; however the pattern changed after a 1-week delay. Experiment 2 removed the opportunity for

generation. A significant interaction of question type (specific or conceptual) and note type (longhand or computer) reflected *worse* performance for longhand than for computer notes on conceptual questions. These results imply that the previously observed advantage of longhand notes for conceptual questions is due to generation, not summarization.

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(3240)

The Importance of Community for Online Competency-Based Education. MEGAN SHEVENELL, FABY GAGNE, STEVE BROWN and JEROME REKART, *College for America at Southern New Hampshire University* — Online competency-based education offers a way for working adults to earn a college degree in a way that fits with their personal schedule. Such flexibly-paced programs, however, often lack mandatory discussion sections, which could result in students feeling isolated from peers. Given the relationship between students' sense of community and learning online (e.g. Garrison, Anderson, & Archer, 2000), we examined the role of a voluntary, online Learning Community (LC) on the academic achievement of 150 adult learners in a flexibly-paced program. Academic performance was measured using average number of competencies mastered before and after joining the LC. As predicted, students mastered significantly more competencies after than before joining the LC, $F(1, 149) = 17.33, p < .001$, partial $\eta^2 = .104$. Thus, online LCs may be beneficial to the academic achievement of online adult learners in flexibly-paced programs though future research is needed to understand the underlying causal mechanisms.

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(3241)

Posted, Uploaded, Tweeted: Low Credibility Yet High Memorability of Facebook as a Source of News. SERGE ONYPER, MARK OAKES, ROSE DOWLEY and BAILEY O'KEEFFE, *St. Lawrence University* — Individuals increasingly rely on social media to access news, yet there is little research on how news delivered via such media might impact perception and memory for the events described. Participants viewed one sentence statements through a credible (e.g., BBC), non-credible (e.g., BuzzFeed), social media (Facebook or Twitter), or blank online platform and were asked whether they believed each was true or false. Their answers were either discredited (half the time) or confirmed by an authoritative source (e.g., Scientific American). After completing surveys and a verbal IQ measure (10 min), they were asked to recall the correct version of each statement specified by the authoritative source and rate the credibility of the statements (half of which were given as opposites of the original) in a recognition test. Participants discounted source credibility: Statements delivered via Facebook were deemed the least credible, yet they were just as memorable as those presented through highly credible news sources. Regardless of the media platform, statements that were refuted were remembered better than those validated. Finally, participants with longer history of Facebook use had better memory overall.

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