

# Brennan R Payne, PhD

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Assistant Professor of Psychology, University of Utah  
1034 Social and Behavioral Science, 380 South 1530 East · Salt Lake City, UT  
*E-mail:* [Brennan.Payne@Utah.edu](mailto:Brennan.Payne@Utah.edu) *Phone:* +1 801. 581. 5040 *Web:* [lama-lab.com](http://lama-lab.com)

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## Professional Appointments

*Assistant Professor.* Department of Psychology (2017 - Present)  
Cognition and Neural Science Program, University of Utah

*Faculty.* Interdepartmental Program in Neuroscience (2017 - Present)  
Brain and Behavior Division, University of Utah

*Faculty.* Center on Aging, University of Utah (2017 - Present)

## Education and Training

*Postdoctoral Research Associate.* The Cognition and Brain Laboratory (2014 - 2017)  
Department of Psychology and The Beckman Institute, University of Illinois

*PhD, MS* (2009-2014)  
Cognitive Science of Teaching and Learning, Department of Educational Psychology  
University of Illinois

*BA* (2005-2009)  
Psychology and Cognitive Science, State University of New York at Oswego

## Awards and Fellowships

1. *APS Rising Star Award* (2017). Association for Psychological Science
2. *Vice President's Clinical and Translational Research Scholar* (2017). University of Utah School of Medicine
3. *Fellow of the Psychonomic Society* (2017)
4. *Early Career Award* (2017). Society for Experimental Psychology and Cognitive Science (Division 3 of The American Psychological Association)
5. *Travel Scholarship* (2015). National Institutes of Health. The Event-Related Brain Potential Boot Camp, Center for Mind and Brain, Davis, CA
6. *The Thomas and Margaret Huang Award for Research in Human Computer Intelligent Interaction* (2015), Huang Fund, Beckman Institute, University of Illinois. Inaugural Award
7. *CGS/Proquest Distinguished National Dissertation Award Nominee* (2014), Behavioral and Social Sciences. Representative of University of Illinois
8. *Travel Scholarship* (2014), National Institutes of Health. Advanced Psychometrics in Cognitive Aging, University of Washington Friday Harbor Laboratory, San Juan Islands, WA
9. *Federal Block Grant Scholarship* (2014)

10. *Beckman Institute Graduate Research Fellowship* (2013), Human Perception and Performance & Cognitive Neuroscience. University of Illinois
11. *The Paul D. Doolen Fellow of Research in the Study of Aging* (2013), University of Illinois
12. *National Institutes of Health Training Fellowship* (2012), “Language Processing: A Training Program” T32-HD055272. Specialization in the Cognitive Neuroscience of Language
13. *The William Chandler Bagley Doctoral Scholarship* (2012), University of Illinois
14. *The Ray Simpson Memorial Award* (2012)
15. *Raymond W. Kulhavy Scholarship for Research in the Cognitive Science of Learning* (2012), University of Illinois
16. *Federal Block Grant Scholarship* (2011)
17. *The Helen B. Daly Award for Excellence in Psychological Research* (2009), SUNY Oswego
18. *Sigma Xi Research Society’s Best Oral Presentation in Psychology Award* (2009), SUNY Oswego

## Grant Funding

### *Currently Funded*

“A Causal Test of Neural Predictive Coding in Language Comprehension: Insights from Simultaneous Electrophysiology and Navigated Transcranial Magnetic Stimulation”. Utah Research Foundation SEED Initiative. Role: Principal Investigator. \$20,000. 2018-2019.

“The Effects of Text Captioning on the Neurocognitive Workload of Speech Understanding”. CaptionCall Telecommunications Research and Development Grant. Role: Principal Investigator. \$103,841. 2018-2019.

“A High-Density EEG Facility for Interdisciplinary Research.” Office of the Vice President for Research. Research Instrumentation Fund. Role: Co-Investigator (with Dr. Matt Euler and Dr. Trafton Drew). \$102,720. 2018.

“Neurocognitive Aging and Individual Differences in Language Comprehension and Memory”. NIH L30AG051229-1. National Institute on Aging Loan Repayment Program for Clinical Research (Renewal Application). Role: Awardee. 2018-2020.

### *Under Review*

“Sense of Purpose and Cognitive Resilience: Integrative Data Analysis of Multiple Aging Studies”. NIH R03AG058904. Role: Principal Investigator (PI with Dr. Pat Hill, WUSTL). Re-submission under review. 2018

### *Not Funded*

“Cognitive Enrichment and Aging: An Ecological Framework” (04/01/2018-3/31/2023). NIH R01AG060117. Role: Consultant (PI: Stine-Morrow). 2018

“Neural Mechanisms of Propofol’s Antidepressant Effects”. Utah Neuroscience Initiative Grant. Role: Co-Principal Investigator. (with Dr. Brian Mickey and Dr. Scott Tadler). 2018

### *Completed*

NIH L30AG051229. “Neurocognitive Aging and Individual Differences in Language Comprehension and Memory”. National Institute on Aging Loan Repayment Program for Clinical Research Role. Awardee. (\$30,750). 2016-2018.

University of Illinois Campus Research Board CRB-13060. (\$20,420). “The Effects of Working Memory Training on Language Comprehension among Younger and Older Adults” (01/01/2012-01/01/2013). Role. Co-PI (with Elizabeth Stine-Morrow). 2014-2015.

## **Publications**

### *Peer Reviewed Journal Articles*

(As of 8.30.2018: Citations: 705, h-index: 13, i10-index: 16)

1. **Payne, B.R.** & Federmeier, K.D. (2018). Contextual constraints on lexico-semantic processing in aging: Evidence from single-word event-related brain potentials. *Brain Research, 1687*, 117-128.
2. Ng, S., **Payne, B.R.**, Federmeier, K.D., & Stine-Morrow, E.A.L. (2018). How struggling adult readers use contextual information when comprehending speech: Evidence from event-related potentials. *International Journal of Psychophysiology, 125*, 1-9.
3. Gross, A.L., **Payne, B.R.**, Cassanova, R., Davoudzadeh, P, Dzierzewski, J, Farias, S.Giovannetti, T., Ip, E., Marsiske, M., Rebok, G., Schaie, W., Thomas, K., & Willis, S., & Jones, R.N. (2018). The ACTIVE conceptual framework as a structural equation model. *Experimental Aging Research, 44*, 1-17.
4. Lohani, M., **Payne, B.R.**, & Issacowitz, D. (2018). Emotional coherence in early and later adulthood during sadness reactivity and regulation. *Emotion, 18*, 789-804.
5. **Payne, B.R.** & Federmeier, K.D. (2017). Event-related brain potentials reveal age-related changes in parafoveal-foveal integration during sentence processing. *Neuropsychologia, 106*, 358-370.
6. **Payne, B.R.** & Federmeier, K.D. (2017). Pace yourself: Intraindividual variability in context use during reading revealed by self-paced event-related brain potentials. *Journal of Cognitive Neuroscience, 29*, 837-854.
7. Hill, P.L. & **Payne, B.R.** (2017). Don’t forget the person when promoting healthy cognitive aging: A comment on Smith (2016). *American Psychologist, 72*, 390-392.
8. **Payne, B.R.** & Stine-Morrow, E.A.L. (2017). The effects of home-based cognitive training on verbal working memory and language comprehension in older adulthood. *Frontiers in Aging Neuroscience, 9*, 1-20.
9. Ng, S., **Payne, B.R.**, Steen. A.A., Federmeier, K.D., & Stine-Morrow, E.A.L. (2017). Use of contextual information by struggling adult readers: Evidence from reading time and event-related brain potentials. *Scientific Studies of Reading, 21*, 359-375.

10. Farias, S., Giovannetti, T., **Payne, B.R.**, Marsiske, M., Rebok, G., Schaie, W., Thomas, K., Willis, S., Dzierzewski, J.M., Unverzagt, F., & Gross, A.L. (2017). Self-perceived difficulties in everyday function precede cognitive decline among older adults in the ACTIVE study. *Journal of the International Neuropsychological Society*, *23*, 1–9.
11. Steen-Baker, A., Ng, S., **Payne, B.R.**, Federmeier, K.D., & Stine-Morrow, E.A.L. (2017). The effects of context on processing words during sentence reading among adults varying in age and literacy skill. *Psychology and Aging*, *32*, 460-472.
12. Lewis, N.A., Turiano, N.A., **Payne, B.R.**, & Hill, P.L. (2017). Purpose and cognitive functioning from middle to older adulthood: Findings from the MIDUS study. *Aging, Neuropsychology, and Cognition*, *24*, 662-671.
13. **Payne, B.R.**, Gross, A. L., Hill, P.L., Parisi, J., Rebok, G., & Stine-Morrow, E.A.L. (2017). Decomposing the relationship between cognitive ability and self-referent memory beliefs in older adulthood: What’s memory got to do with it? *Aging, Neuropsychology, and Cognition*, *24*, 345-362.
14. Stites, M.C., **Payne, B.R.**, & Federmeier, K.D. (2017). Getting ahead of yourself: Parafoveal word expectancy modulates the N400 during sentence reading. *Cognitive, Affective, and Behavioral Neuroscience*, *17*, 475-490.
15. **Payne, B.R.**, Stites, M.C., & Federmeier, K.D. (2016). Out of the corner of my eye: Foveal semantic load modulates parafoveal processing in reading. *Journal of Experimental Psychology: Human Perception and Performance*, *26*, 1839-1857.<sup>1</sup>
16. Liu, X., Chin, J., **Payne, B.R.**, Fu, W-T., Morrow, D., & Stine-Morrow, E.A.L. (2016). Adult age differences in information foraging in an interactive reading environment. *Psychology and Aging*, *31*, 211-223.
17. **Payne, B.R.** & Stine-Morrow, E.A.L. (2016). Risk for mild cognitive impairment is associated with semantic integration deficits in sentence processing and memory. *The Journal of Gerontology: Psychological Sciences*, *71*, 243-253. <sup>2</sup>
18. Stine-Morrow, E.A.L. & **Payne, B.R.** (2016). Age differences in language segmentation. *Experimental Aging Research*, *42*, 107-125.<sup>3</sup>
19. **Payne, B.R.**, Lee, C-L., & Federmeier, K.D. (2015). Revisiting the incremental effects of context on word processing: Evidence from single-word event-related brain potentials. *Psychophysiology*, *52*, 1456-1469.
20. Chin, J., **Payne, B.R.**, Gao, X., Stine-Morrow, E.A.L., Morrow, D.G., Conner-Garcia, T., Graulich, J.F., & Murray, M.D. (2015). Knowledge influences comprehension and memory for health information among older adults: Distinguishing domain-general and domain-specific knowledge effects. *Memory*, *23*, 577-589.
21. Chin, J., **Payne, B.R.**, Fu, W.T., Morrow, D.G., & Stine-Morrow, E.A.L. (2015). Information foraging across the lifespan: Search and switch in unknown patches. *Topics in Cognitive Science*, *3*, 428-450.

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<sup>1</sup>2017 Early Career Award Paper: Society for Experimental Psychology and Cognitive Science (APA Division 3)

<sup>2</sup>Editors Choice

<sup>3</sup>Special issue on “Age, Hearing, and Speech Comprehension”. A Festschrift in honor of Dr. Arthur Wingfield.

22. **Payne, B.R.**, Gross, A.L, Parisi, J.M., Sisco, S., Stine-Morrow, E.A.L., Marsiske, M., & Rebok, G.W. (2014). Modeling longitudinal changes in older adults' memory for spoken discourse: Findings from the ACTIVE cohort. *Memory, 22*, 990-1001.
23. Stine-Morrow, E.A.L., **Payne, B.R.**, Roberts, B.W., Kramer, A.F., Morrow, D.G., Payne, L., Hill, P.L., Jackson, J.J., Gao, X., Noh, S.R., Janke, M., & Parisi, J.M. (2014). Training versus engagement as paths to cognitive optimization with aging. *Psychology and Aging, 29*, 891-906.
24. **Payne, B.R.** & Stine-Morrow, E.A.L. (2014). Age differences in wrap-up during sentence understanding: Evidence from ex-Gaussian distributional analyses of reading time. *Psychology and Aging, 29*, 213-228.
25. **Payne, B.R.**, Grison, S., Gao, X., Christianson, K., Morrow, D.G., & Stine-Morrow, E.A.L. (2014). Aging and individual differences in binding during sentence understanding: Evidence from temporary and global syntactic attachment ambiguities. *Cognition, 130*, 157-173.
26. Hill, P.L., **Payne, B.R.**, Jackson, J.J., Stine-Morrow, E.A.L. & Roberts, B.W. (2014). Perceived social support predicts increased conscientiousness during older adulthood. *The Journal of Gerontology: Psychological Sciences, 69*, 543-547.
27. Chin, J., **Payne, B.R.**, Battles, A., Fu, W.T., Morrow, D.G., & Stine-Morrow, E.A.L. (2012). Information foraging in unknown patches across the lifespan. in *Proceedings of the 34th Annual Meeting of the Cognitive Science Society*, eds Miyake N., Peebles D., Cooper R. P., editors. (Sapporo: Cognitive Science Society), 1404-1409.
28. **Payne, B.R.** & Stine-Morrow, E.A.L (2012). Aging, parafoveal preview, and semantic integration in sentence processing: Testing the cognitive workload of wrap-up. *Psychology and Aging, 27*, 638-649.
29. Jackson, J.J., Hill, P.L., **Payne, B.R.**, Roberts, B.W., & Stine-Morrow, E.A.L. (2012). Can an old dog learn (and want to experience) new tricks? Cognitive training changes openness in older adults. *Psychology and Aging, 27*, 286-292.
30. **Payne, B.R.**, Gao, X., Noh, S.R., Anderson, C.J., & Stine-Morrow, E.A.L. (2012). The effects of print exposure on sentence processing and memory among older adults: Evidence for efficiency and reserve. *Aging, Neuropsychology, and Cognition, 19*, 122-149.<sup>4</sup>
31. **Payne, B.R.**, Jackson, J.J, Hill, P.L., Gao, X., Roberts, B.W., & Stine-Morrow, E.A.L. (2012). Memory self-efficacy predicts responsiveness to inductive reasoning training in older adults. *The Journal of Gerontology: Psychological Sciences, 67*, 27-35.
32. **Payne, B.R.**, Jackson, J.J., Noh, S.R., & Stine-Morrow, E.A.L. (2011). In the zone: Flow state and cognition in older adults. *Psychology and Aging, 26*, 738-743.

#### *Edited Book Chapters*

1. **Payne, B.R.**, Ng, S., Shantz, K., & Federmeier, K.D. (2018, in press). Event-related brain potentials and language: The N's and P's. In A. B. Cieřlicka and R. R. Heredia (eds.), *The Bilingual Brain Unwrapped*. Psychology Press.

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<sup>4</sup>Special issue on "Compensatory Mechanisms for Age-Related Cognitive Decline".

2. **Payne, B.R.** & Hill, P.L. (2016). Experimental research methods in lifespan human development. *The SAGE Encyclopedia of Lifespan Human Development*.
3. Stine-Morrow, E. A. L. & **Payne, B.R.** (2015). Education and learning: Lifespan perspectives. In J. D. Wright (Ed.) *International Encyclopedia of the Social and Behavioral Sciences (Second edition)*, Oxford: Elsevier.

*Manuscripts under review*

1. **Payne, B.R.**, Stites, M.C., & Federmeier, K.D. Event-related brain potentials reveal how multiple aspects of semantic processing unfold across parafoveal and foveal vision during sentence reading.
2. **Payne, B.R.** & Federmeier, K.D. Individual differences in reading speed are linked to variability in the processing of lexical and contextual information: Evidence from single-trial event-related brain potentials.
3. Lohani, M., **Payne, B.R.**, & Strayer, D.L. A review of psychophysiological measures to sense and assess cognition and performance in driving research.
4. Ostlund, B.D.,\* Williams, L.H.\*, Conradt, E., **Payne, B.R.**, Crowell, S.E., & Drew, T. The adaptive influence of pregnancy-specific anxiety on infant neural noise.
5. Ng, S., **Payne, B.R.**, Federmeier, K.D., & Stine-Morrow, E.A.L. The impact of literacy proficiency on resource allocation and recall among adult readers.
6. **Payne, B.R.**, Ng, S., Federmeier, K.D., & Stine-Morrow, E.A.L. Individual differences in adult literacy skill and eye-movement control in reading: Evidence from a diverse community-based sample.

**Selected Invited Talks and Symposia**

1. “Faces of the Future Symposium”. *Annual Meeting of the Society for Psychophysiological Research*, Quebec City, Quebec, Canada, 2018 (upcoming).
2. GoogleX Tech Talk. *Google*. Mountain View, CA. 2018.
3. Symposium: “Developments in eye movement research on reading across the lifespan”. *Annual Meeting of the Experimental Psychology Society*. Leicester, UK. 2018.
4. URPP Dynamics of Healthy Aging Workshop. *University of Zurich*. Zurich, Switzerland. 2018.
5. Symposium on “Personality and healthy aging”. *European Conference on Personality*. Zadar, Croatia. 2018.
6. Cognitive and Brain Sciences, Department of Psychology. *Louisiana State University*. Baton Rouge, LA. 2016.
7. Department of Psychology and Cognitive Science Program. *University of North Carolina at Charlotte*. Charlotte, NC. 2016.
8. Cognition and Neural Sciences, Department of Psychology. *University of Utah*. Salt Lake City, UT. 2016.

9. Department of Psychology. *Old Dominion University*. Norfolk, Va. 2016.
10. Department of Psychological and Brain Sciences. *Washington University in St. Louis*. St Louis, MO. 2016.
11. Department of Psychology. *University of Birmingham*. Birmingham, UK. 2016.
12. Educational Neuroscience, Department of Educational Psychology. *University of Alabama*. Tuscaloosa, AL. 2016.
13. The Department of Psychology, *University of Illinois*. Urbana, IL. 2015.
14. Beckman Institute External Review of Biological Intelligence and Human-Computer Intelligent Interaction. *University of Illinois*. Urbana, IL. 2015.
15. Cognitive Neuroscience, Department of Psychology. *University of Illinois*. Urbana, IL. 2015.
16. Illinois Learning Sciences Design Laboratory Data Blitz. *University of Illinois*. Urbana, IL. <https://www.youtube.com/watch?v=mLM3VChCsos>. 2015.
17. Department of Psychology and Cognitive Science Program. *University of Richmond*. Richmond, VA. 2014.
18. WingfieldFest: A Festschrift in honor of Arthur Wingfield. Volen Center for Complex Systems. *Brandeis University*. Waltham, MA. 2014.

#### *Selected Presentations and Abstracts*

##### \*Student-researcher

1. LoTempio, S.\*, Federmeier, K.D., & **Payne, B.R.** (2018). Co-registration of pupillary and electrophysiological responses in a visual oddball task. *Annual Meeting of the Psychonomic Society*
2. **Payne, B.R.**, Silcox, J.\*, Lash, A., Ferguson, S.H., & Lohani, M. (2018). Text captioning reduces the effects of perceptual effort on speech memory. *Annual Meeting of the Psychonomic Society*.
3. **Payne, B.R.**, Silcox, J.\*, Lash, A., Ferguson, S.H., & Lohani, M. (2018). Assistive text captioning offsets the effects of background noise on speech memory and pupillometry. *Academy of Rehabilitative Audiology*.
4. Chandler, M.C., McGowan, A.L., Wray, A.H., **Payne, B.R.**, Pontifex, M.B. (2018). The relationship between aerobic fitness and neuroelectric indices of reading in college-aged adults. *Annual Meeting of the Society for Psychophysiological Research*.
5. Ostlund, B.D.\*, Williams, L.H.\*, **Payne, B.R.**, Conradt, E., Crowell, S.E., & Drew, T. (2018). The adaptive influence of pregnancy-specific anxiety on infant neurophysiology. *Cognitive Science Association for Interdisciplinary Learning*. Hood River, Oregon.
6. **Payne, B.R.** & Federmeier, K.D. (2018). Semantic activation and integration across parafoveal and foveal vision during sentence reading: Evidence from event-related brain potentials. *CUNY Conference on Human Sentence Processing*, Davis, CA.

7. **Payne, B.R.** & Federmeier, K.D. (2017). Take your time: Aging, volitional control, and intraindividual variability in context processing in sentence comprehension. *Annual Meeting of the Society for Psychophysiological Research*. Vienna, Austria.
8. Ng, S., **Payne, B.R.**, Federmeier, K.D., & Stine-Morrow, E.A.L. (2017). How do low literacy adults read and how much do they retain? A reading-time and recall study. *Annual Meeting of the Association for Psychological Science*. Boston, MA.
9. Gross A.L., **Payne, B.R.**, Casanova, R., Dvoudzadeh, P., Dzierzewski, J., Farias, S., Giovannetti, T., Ip, E., Marsiske, M., Rebok, G., Schaie, W., Thomas, K., Willis, S., Jones, K. (2017). Moving Theory to Practice—Hands-On Approaches to Cognitive Remediation in Older Adults. *Annual Meeting of the American Psychological Association*. Washington, DC.
10. **Payne, B.R.** & Federmeier, K.D. (2017). Age-related changes in incremental semantic processing: Evidence from single-word ERPs. *Annual Meeting of the Cognitive Neuroscience Society*. San Francisco, CA.
11. Hill, P.L., Lewis, N.A., **Payne, B.R.**, & Turiano, N.A. (2016). Sense of purpose predicts level and change in subjective memory beliefs: Findings from the MIDUS cohort. *Annual Meeting of the Gerontological Society of America*.
12. **Payne, B.R.** & Federmeier, K.D. (2016). As far as the eye can see: Event-related brain potentials reveal dynamics of visuospatial attention allocation during reading. *56th Annual Meeting of the Society for Psychophysiological Research*. Minneapolis, MN.
13. **Payne, B.R.** & Federmeier, K.D. (2016). Co-registration of event-related single-trial EEG and reading time reveal intraindividual variability in context use in language processing. *Annual Meeting of the Cognitive Neuroscience Society*. New York City, New York.
14. **Payne, B.R.** & Federmeier, K.D. (2016). Event-related brain potentials reveal age-related changes in the recruitment of parafoveal visual attention in reading. *The Cognitive Aging Conference*. Atlanta, GA.
15. Steen, A., Ng, S., **Payne, B.R.**, Federmeier, K.D., & Stine-Morrow, E.A.L. (2016). The effects of age and literacy skill on eye-movement control during lexical ambiguity resolution. *The Cognitive Aging Conference*. Atlanta, GA.
16. Ng, S., **Payne, B.R.**, Stine-Morrow, E.A.L. & Federmeier, K.D. (2016). Literacy skill modulates age differences in the use of context in language processing: Evidence from ERPs. *The Cognitive Aging Conference*. Atlanta, GA.
17. **Payne, B.R.** & Stine-Morrow, E.A.L. (2016). Mild cognitive impairment and semantic integration in language processing. *CLEAR Initiative: Cognition, Lifespan Engagement, Aging, and Resilience*. Beckman Institute, Urbana, IL.
18. **Payne, B.R.** & Federmeier, K.D. (2015). Multiple effects of sentential context on lexical processing: Evidence from single-item event-related brain potentials. *Annual Meeting of the Psychonomic Society*. Chicago, IL.
19. **Payne, B.R.** & Federmeier, K.D. (2015). Risky readers? Event-related brain potentials reveal age-related changes in the recruitment of parafoveal visual attention in reading. *Society for the Neurobiology of Language*. Chicago, IL.



20. **Payne, B.R.** & Federmeier, K.D. (2015). Pace yourself: Intraindividual variability in context use revealed by self-paced event-related brain potentials. *55th Annual Meeting of the Society for Psychophysiological Research*. Seattle, WA.
21. Steen, A., Ng, S., **Payne, B.R.**, Federmeier, K.D., & Stine-Morrow, E.A.L. (2015). Use of contextual constraint among adult readers varying in age and literacy skill. *Annual Meeting of the American Psychological Association*. Toronto, ON, Canada.
22. Gross A.L., **Payne, B.R.**, Casanova, R., Dvoudzadeh, P., Dzierzewski, J., Farias, S., Giovannetti, T., Ip, E., Marsiske, M., Rebok, G., Schaie, W., Thomas, K., Willis, S., Jones, K. (2015). The ACTIVE conceptual diagram as a structural equation model. *Annual Meeting of the Gerontological Society of America*. Orlando, FL.
23. **Payne, B.R.**, Stites, M.C., & Federmeier, K.D. (2015). Out of the corner of my eye: Event-related potentials reveal effects of foveal load on parafoveal word processing during reading. *Annual Meeting of the Cognitive Neuroscience Society*. San Francisco, CA.
24. Stites, M.C., **Payne, B.R.**, & Federmeier, K.D. (2015). Getting ahead of yourself: Parafoveal word expectancy modulates the N400 during sentence reading. *Annual Meeting of the Cognitive Neuroscience Society*. San Francisco, CA.
25. Lewis, N., Turiano, N., **Payne, B.R.**, & Hill, P. (2014). Purpose and cognitive functioning from middle to older adulthood. *67th Annual Meeting of the Gerontological Society of America*. Washington, DC.
26. **Payne, B.R.** & Stine-Morrow, E.A.L. (2014). RT distributional analyses of age differences in wrap-up during sentence comprehension. *The Cognitive Aging Conference*. Atlanta, GA.
27. **Payne, B.R.** & Stine-Morrow, E.A.L. (2014). The iTrain project: Effects of home-based verbal working memory training on language comprehension in older adults. *The Cognitive Aging Conference*. Atlanta, GA.
28. Chin, J., **Payne, B.R.**, Fu, W-T, Morrow, D.G., Stine-Morrow, E.A.L. (2014). Information foraging across the lifespan: Search and switch in unknown patches. *The Cognitive Aging Conference*, Atlanta, GA.
29. **Payne, B.R.**, James, A., Stine-Morrow, E.A.L., & Watson, D. (2014). Eye movements during reading reflect subsequent sentence memory: Evidence from subject and object relative clauses. *CUNY Conference on Human Sentence Processing*, Columbus, OH.
30. Stine-Morrow, E.A.L., **Payne, B.R.**, & Giffin, L. (2013). *Everyday engagement as a source of cognitive vitality? Lessons learned from the Senior Odyssey Project*. In (Chairs), Plasticity and Real-Life Interventions. Symposium presented at the 66th annual meeting of the Gerontological Society of America. Orlando, FL.
31. **Payne, B.R.** (2013). *Publishing in experimental psychology: A graduate student's perspective*. In D. Morrow, F. Durso, & Brewer, N. (Chairs). How to publish papers that matter. Symposium presented at the annual meeting of the American Psychological Association. Honolulu, HI.
32. Giffin, L., **Payne, B.R.**, & Stine-Morrow, E.A.L. (2013). Dispositional flow: A resource for successful aging. *The 66th Annual Meeting of the Gerontological Society of America*, New Orleans, LA.

33. **Payne, B.R.**, Hill, P.L., Gross, A.L., Parisi, J.M., Rebok, G.W., & Stine-Morrow, E.A.L. (2013). Bifactor modeling of subjective memory beliefs and cognitive function in older adulthood: What's memory got to do with it? *The 121st Annual Meeting of the American Psychological Association*, Honolulu, HI.
34. **Payne, B.R.** & Stine-Morrow, E.A.L. (2012). Aging and parafoveal word processing at clause and sentence boundaries: An eye-movement study. *The 2012 Cognitive Aging Conference*, Atlanta, GA.
35. Chin, J., **Payne, B.R.**, Morrow, D., Stine-Morrow, E.A.L., Gao, X., Conner-Garcia, T., Graumlich, J., & Murray, M. (2012). Effects of domain: General and health knowledge effects on sentence processing and recall among older adults. *The 2012 Cognitive Aging Conference*, Atlanta, GA.
36. Gao, X., Grison, S., **Payne, B.R.**, Christianson, K., Morrow, D.G., & Stine-Morrow, E.A.L. (2012). Aging and text integration across sentence boundaries: An eye-movement study. *The 2012 Cognitive Aging Conference*, Atlanta, GA.
37. Chin, J., **Payne, B.R.**, Battles, A., Fu, W., Morrow, D.G., & Stine-Morrow, E.A.L. (2012). Age differences in information foraging: Search and switch in word search puzzles. *The 2012 Cognitive Aging Conference*, Atlanta, GA.
38. Grison, S., **Payne, B.R.**, Christianson, K., Morrow, D.G., & Stine-Morrow E.A.L. (2012). Aging and under-specification of syntactic ambiguity resolution. *The 2012 Cognitive Aging Conference*, Atlanta, GA.
39. **Payne, B.R.** (2012). Language experience moderates sentence comprehension in adulthood. *HABITS Initiative: Health, Attitudes, Biology, Information, Technology, Society*, Urbana, IL.
40. **Payne, B.R.**, Hill, P.L., & Stine-Morrow, E.A.L. (2012). *Memory self-efficacy and cognitive plasticity in the context of cognitive interventions: Findings from Senior Odyssey and ACTIVE*. In J. Berry & R. West (Chairs), Theoretical and empirical advances in memory self-efficacy research. Annual meeting of the American Psychological Association. Orlando, FL.
41. **Payne, B.R.** (2012). *Memory beliefs and cognitive training interventions in the elderly*. In N. Sciolino & E. Pavlova (Chairs), American Psychological Association Convention's 6th Annual Science DataBlitz Presentation. Annual meeting of the American Psychological Association. Orlando, FL. <sup>5</sup>
42. Stine-Morrow, E. A. L., **Payne, B. R.**, Gao, X., Chui, H., Jackson, J., & Hill, P. (2011). *Engagement as an organizing principle for cognitive resilience*. In P. Hartman-Stein (Chair), Innovative interventions for cognitive enhancement. Symposium presented at the annual meeting of the American Psychological Association. Washington, DC.
43. **Payne, B.R.**, Jackson, J.J., Hill, P.L., Gao, X., Roberts, B.W. & Stine-Morrow, E.A.L. (2011). Memory self-efficacy predicts responsiveness to inductive reasoning training in older adults. *The 64th meeting of the Gerontological Society of America*, Boston, MA.
44. Chui, H., Gao, X., **Payne, B.R.**, Hill, P., Jackson, J.J., Kramer, A.F., & Stine-Morrow, E.A.L. (2011). Social support moderates the effect of attentional inconsistency on fluid ability

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<sup>5</sup> One of 15 nominated speakers. Representing division 20- Adult Development and Aging.

- in older adults. *The 119th annual convention of the American Psychological Association*, Washington, DC.
45. **Payne, B.R.** (2011). Memory beliefs in older adulthood: Individual differences in non-target cognitive training outcomes. *The Lifelong Brain and Cognition Proseminar*, Urbana, IL.
  46. **Payne, B.R.** (2011). Cognitive reserve in language processing across the lifespan: The role of print exposure. *The Beckman Institute Innovation Summit on Educational Neuroscience: Minds, Brains, and New Literacies*, Urbana, IL.
  47. **Payne, B.R.** (2010). Cognitive plasticity in older adulthood: The role of self-efficacy beliefs in cognitive training. *The Cognitive Science of Teaching and Learning Proseminar*, Urbana, IL.
  48. Gao, X., **Payne, B.R.**, & Stine-Morrow, E.A.L. (2010). Memory self-efficacy predicts longitudinal changes in resource allocation and text memory in reading. *The Gerontologist*, 50, 149.
  49. **Payne, B.R.**, Gao, X., & Stine-Morrow, E.A.L. (2010). Measures of reading skill dissociate online language processes among older adults. *The Gerontologist*, 50, 148.
  50. Jackson, J.J, Hill, P.L., **Payne, B.R.**, Roberts, B.W., & Stine-Morrow, E.A.L. (2010). Can an old dog learn (and want to experience) new tricks? Cognitive training increases openness in older adults. *The 15th annual European Conference on Personality*, Brno, Czech Republic.
  51. **Payne, B.R.**, Noh, S.R., & Stine-Morrow, E.A.L. (2010). In the zone: Flow and cognition in older adults. *The 2010 Cognitive Aging Conference*, Atlanta, GA.
  52. Noh, S.R., Shake, M.C., **Payne, B.R.**, & Stine-Morrow, E.A.L. (2010). Age differences in the detection of textbase or situational inconsistency during narrative comprehension: An eye movement study. *The 2010 Cognitive Aging Conference*, Atlanta, GA.
  53. **Payne, B.R.** (2009). Cognition and activity engagement in adulthood. *The Cognitive Science of Teaching and Learning Proseminar*, Urbana, IL.
  54. **Payne, B.R.**, Smiler, A.P., & O'Brien, C. (2009). You are what you watch: Identity and media usage. *The 117th annual convention of the American Psychological Association*, Toronto, ON, Canada.
  55. **Payne, B.R.** (2008). Investigating the occurrence of change deafness and inattentional deafness in musical auditory scenes. *The Cornell University Sigma Xi Conference*, Ithaca, NY.

## Editorial Service

### *Editorial Board*

*Psychology and Aging*, Consulting Editor (2018 - )

### *Ad Hoc Reviewer*

*Aging, Neuropsychology, and Cognition; Applied Psycholinguistics; Brain Imaging and Behavior; Brain and Cognition; Clinical Interventions in Aging Research; Cognition; Cognitive Science; Cog-*

*nitive Neuropsychology; Developmental Psychology; The Gerontologist; The International Journal of Aging and Human Development; Journal of Adolescent Health, Medicine, and Therapeutics; Journal of Experimental Psychology: Human Perception and Performance; Journal of Memory and Language; The Journals of Gerontology: Psychological Science; Journal of Speech, Language, and Hearing Research; Journal of Research in Reading; Laboratory Phonology; Language, Cognition, and Neuroscience; Memory; Neurobiology of Aging; Neuropsychologia; PLOS ONE; Proceedings of the National Academy of Sciences; Psychophysiology; Psychology and Aging; Quarterly Journal of Experimental Psychology.*

## **Teaching Experience and Mentorship**

### *Courses Taught*

*Cognitive Neuropsychology.* PSYC 3140. Undergraduate course. University of Utah

*Cognition and Neural Sciences Applications to Research.* PSY 6140. Graduate methods course. University of Utah

*Advanced Cognitive Electrophysiology.* PSY 5150/6150 (upcoming). Co-instructor. Graduate/undergraduate course. University of Utah

*Applied Hierarchical Linear Modeling with Lab.* EPSY 590. Graduate seminar. University of Illinois

*Linear mixed-effects modeling of electrophysiological data.* Summer Methods Workshop. University of Illinois

### *Student supervision*

## **Graduate Mentorship**

Jack Silcox, Graduate student, Cognition and Neural Science

Sara LoTempio, Graduate student, Cognition and Neural Science (Co-mentor w/ David Strayer)

## **Undergraduate Mentorship**

Vanessa Srivastava, Honors Thesis Advisor and UROP Mentor. Psychology. University of Utah

Melissa Coeffel, Honors thesis. Psychology (Behavioral Neuroscience). University of Illinois

## **Thesis, Prelim Exam, and Dissertation Committees**

Sara LoTempio, M.S. (CNS, Utah)

Ty McKinney, M.S. (CNS, Utah)

Rachel Hopman, PhD. (CNS, Utah)

Spencer Castro, PhD. (CNS, Utah)

Ascher Munion, (CNS, Utah)

## Professional Service

2018. *Graduate Committee*. Department of Psychology, University of Utah
2017. *Education and Training Committee*. Society for Psychophysiological Research
2017. *Faculty Search Committee*. Department of Neurobiology and Neuroanatomy, University of Utah
2017. *Graduate Committee*. Department of Psychology, University of Utah
2016. *Beckman Institute Initiative*. The Illinois Language and Literacy Initiative (ILLI) and The Cognition Lifespan Engagement and Resilience (CLEAR) Initiative. University of Illinois at Urbana-Champaign
2014. *Faculty Search Committee*. Cognitive Science of Learning Search Committee. University of Illinois at Urbana-Champaign
2013. *Co-organizer* NIH Sponsored Language Processing Seminar Series. Beckman Institute for Advanced Science and Technology. University of Illinois at Urbana-Champaign
2013. *Fellowship Search Committee* (2013). Paul D. Doolen Fellow for Research in the Study of Aging. University of Illinois System (Urbana-Champaign, Chicago, & Springfield)
- 2011-2015. *Community Outreach and Science Education*. Beckman Institute Open House

## Tools and Scale Development

The AFSS (Activity Flow State Scale) (with Elizabeth A.L. Stine-Morrow, Soo Rim Noh, and Joshua Jackson). Available from PsycTESTS. doi: 10.1037/t06855-000

The iTrain Working Memory App for iPad (with Elizabeth A.L. Stine-Morrow & Thomas Deegan). Source Code available at: <https://github.com/TALL1532/itrain>

## In The News

ImpactStory Summary: <https://impactstory.org/u/0000-0001-6732-6599/>  
Article Hyperlinks available at [brennanpayne.com](http://brennanpayne.com)

*Word Economic Forum*. “What is cognitive reserve, and how do we increase it?””

*CNN*. “Study: Challenging seniors brains can also change their personality””

*Science Daily*. “Enhancing cognition in older adults also changes personality”

*BI Annual Report*. “Read between the lines”

*Elderbranch*. Interview: “Memory for language in older adulthood”

*Futurity*. “Brainy tasks keep seniors mentally fit”

*Illinois News Bureau*. “Doolen scholarships awarded to continue studies in gerontology””

*BI News*. “Power of positive thinking in older adulthood”