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Revised 1/2019

PRIMARY ACADEMIC POSITION

- 2014-Current **Associate Professor of Psychology**, Department of Psychology, University of Notre Dame
- 2019-Current **Andrew J. McKenna Family Collegiate Chair**, University of Notre Dame
- 2011-2019 **Nancy O'Neill Collegiate Chair**, University of Notre Dame
- 2009-2014 **Assistant Professor of Psychology**, Department of Psychology, University of Notre Dame

OTHER ACADEMIC POSITIONS

- 2012-2013 **Visiting Professor**, Boston College, Department of Psychology
- 2011-2012 **H. Smith Richardson Jr. Fellow**, Center for Creative Leadership, Greensboro, NC

EDUCATION

- 2006-2009 **Harvard University, Postdoctoral Fellow, Psychology/Cognitive Neuroscience**
Advisors: Daniel Schacter and Robert Stickgold
- 2005-2006 **Harvard Medical School, Beth Israel Deaconess Medical Center, Postdoctoral Fellow, Cognitive Neuroscience**
Advisor: Robert Stickgold
- 1999-2005 **University of Arizona, Ph.D., Psychology/Cognitive Neuroscience**
Advisor: Lynn Nadel
- 1997-1999 **Mount Holyoke College, M.A., Experimental Psychology**
- 1991-1995 **University of San Diego, B.A., Psychology, *summa cum laude***

RESEARCH GRANTS AND TRAINING FELLOWSHIPS (Funded, Pending, Past)

Funded

7/2015-6/2018 (with no-cost extension through 6/2019)

Co-Principal Investigator National Science Foundation \$550,976
Stress at learning interacts with sleep to optimally consolidate emotional memories (BCS-1539361). This project aims to examine how stress and cortisol during learning influence memory consolidation using both task-based and resting-state fMRI analyses. Note that while this grant tests my newest theory about sleep-stress interactions during memory consolidation, it is a fMRI grant, and thus most money goes to Boston, where the scanner, and the other Co-PI (Elizabeth Kensinger), is located.

9/2014-5/2018 (with no-cost extension through 5/2019)

Co-Investigator National Institutes of Health \$2,913,061
NetHealth: Modeling the Co-Evolution of Social Networks and Health Behaviors, (ROI HL117757-01A1). In collaboration with the departments of Sociology and Computer Science and Engineering, this project will examine the extent to which people's social ties to others affect two important health-related behaviors—physical activity and sleep habits---that are known to have effects on health outcomes such as specific types of cancer, cardiovascular diseases, obesity, cognitive functioning and life expectancy. My lab is testing the ability of the BodyMedia Health Armbands to measure properties of sleep, and to develop and test models about the effects of social network position on sleep habits, as well as the effects of sleep habits on network position.

Pending

Jessica D. Payne, P.I. National Science Foundation \$683,201.14
(Elizabeth A. Kensinger, co-P.I.)

Sleep and Selective Emotional Memory Consolidation from Young Adulthood through Middle Age: PSG and fMRI Investigations

03/01/2019-02/28/2023

This project examines whether sleep produces the same selective emotional benefits in middle-aged adults as younger adults, and whether the same sleep physiology and neural networks underlie this selective memory consolidation.

Past

9/2011-8/2016

Co-Investigator National Institutes of Health \$3,062,774
Notre Dame Study of Well-Being (NDHWP), (NIA 2 ROI AG02357-06). In collaboration with Cindy Bergeman, Ph.D. at the University of Notre Dame, this project aims to detail the types and qualities of life stress that initiate cascades of

perceptual, emotional, and biological responses that can lead to disorder and disease, and to examine coping resources that protect against them.

- 4/2016 **Principal Investigator** **ISLA Large Grant, Notre Dame** **\$4,000**
The Effects of Emotional Salience and Aging on Selective Sleep-Based Memory Consolidation
- 3/2014 **Principal Investigator** **ISLA Founders Grant, Notre Dame** **\$10,000**
Restoring Healthy Sleep to Prevent the Deterioration of Prospective Memory in Depressed Individuals: A CBT-I Approach
- 2013-2015 **Primary Sponsor** **National Science Foundation** **\$96,000**
Does Sleep Influence Memory for Gist?
 NSF Graduate Research Fellowship: Recipient: Enma Pardilla-Delgado
- 1/2015-12/2017 **Primary Sponsor** **National Institutes of Health** **\$184,518**
The Impact of Emotional Salience and Aging on Selective Sleep-Based Memory Consolidation, (F32AG047807).
 National Research Service Award (NRSA) Postdoctoral Fellowship; Primary Investigator: Dr. Sara Alger; Co-Sponsors: Dr. Michael Perlis (U Penn), Cindy Bergeman (Notre Dame), and Elizabeth Kensinger (Boston College).
- 11/2013 **Primary Sponsor** **ISLA Notre Dame** **\$1296.00**
Individual Variability in Statistical Learning: A Possible Cognitive Mechanism of Insight. Awarded to Steve Mattingly
- 8/2010-7/2013 (with no-cost extension through 2014) **Co-Principal Investigator** **National Science Foundation** **\$454,888**
Sleep Dependent Preservation of Emotional Memory: EEG and fMRI Investigations (BCS-0963581). In collaboration with Elizabeth Kensinger, Ph.D. at Boston College (Co-PI), this project uses polysomnographic (PSG) sleep studies and fMRI to examine emotional memory formation during sleep. The sleep research is conducted at Notre Dame and fMRI studies are conducted in Boston. Through the newly formed Notre Dame/Boston College Cognitive Neuroscience Exchange Program, undergraduates from Notre Dame spend a summer in Boston learning fMRI techniques, and Boston College students spend a summer at Notre Dame to learn sleep polysomnography.
- 2006-2009 **Harvard University, Mind, Brain and Behavior Postdoctoral Research Fellowship**
The role of sleep in episodic memory consolidation
- 2000-2003 **McDonald-Pew Cognitive Neuroscience/Flinn Foundation Graduate Fellowship**
The effects of stress on human memory function

2002 **University of Arizona Research Grant**

1994-1995 **Associated Students Research Grant (University of San Diego)**

HONORS AND AWARDS

Research/Academic

- 2017 National Academy of Sciences, Kavli Fellow. *“About the Kavli Fellow Program: Kavli fellows are selected by the advisory board of The Kavli Foundation and members of the National Academy of Sciences from young researchers who have already made recognized contributions to science, including recipients of major national fellowships and awards and who have been identified as future leaders in science. More than 150 Kavli fellows have been elected into the National Academy of Sciences and 10 have been awarded Nobel Prizes.”*
- 2015 Early Career Award from the Psychonomic Society, *conferred upon young scientists who have made significant contributions to scientific psychology early in their careers (associated with a \$2500 research award to be used for projects of my choice)*
- 2011- Nancy O'Neill Collegiate Chair in Psychology – awarded for outstanding research, teaching and service at the University of Notre Dame *(associated with a research award of \$75,000 to be used for projects of my choice)*
- 2011-12 H. Smith Richardson Jr. Fellow, Center for Creative Leadership, Greensboro, NC – awarded for my work applying cognitive and affective neuroscience to leadership practice and business ethics *(associated with a research award of \$20,000 to be used for a project of my choice)*
- 2011- Appointed Reilly Center Fellow
- 2011 Notre Dame's single candidate nominated to apply for Searle Scholars Funds
- 2010 Laird Cermak Early Career Award for early contribution to memory research by the International Neuropsychological Society – *given to candidates who are less than five years from completion of training for outstanding research in memory or memory disorders*
- 2010 Provost's interfaculty initiative on interdisciplinary research, funds awarded for program in Brain, Mind and Behavior
- 2006-2008 Abstract Awards for Scientific Merit, Sleep Research Society
- 2003 Fellow, Vivian Smith Advanced Studies Institute of the International Neuropsychological Society
- 1995 Psychology Research Award for Honors Thesis
- 1995 Departmental Honors in Psychology
- 1994-1995 President, Psi Chi: University of San Diego
- 1992-1995 Dean's List, First Honors

1991-1995 University of San Diego Honors Program

Teaching

2018- Appointed Kaneb Center for Teaching and Learning Center Faculty Fellow
2016 University of Notre Dame Rev. Edmund P. Joyce Award for Excellence in Undergraduate Teaching
2012 University of Notre Dame Frank O'Malley Undergraduate Teaching Award
2008-2009 Harvard University Derek Bok Center Certificate of Distinction in Teaching
2007-2008 Harvard University Derek Bok Center Certificate of Distinction in Teaching
2006-2007 Harvard University Derek Bok Center Award for Teaching Excellence

PUBLICATIONS

H-Index: 27

+ Author is a Notre Dame postdoctoral fellow

* Author is a Notre Dame graduate student

° Author is a current or prior Notre Dame undergraduate student

** Author is a current co-mentored graduate student

Author is a prior student who I mentored as a postdoc at Harvard or as a graduate student at the University of Arizona

JOURNAL ARTICLES – PEER REVIEWED (Impact Factors and DOIs provided for all articles since tenure)

Under Review

*Cunningham, A., *Mattingly, S., Wirth, M.M., +Alger, S.E., & **Payne, J.D.** Stress exposure magnifies tradeoffs in emotional memory: Implications for memory consolidation.

Bolinger, E., *Cunningham, T.J., Payne, J.D., °Bowman, M.A., Bulca, E., Zinke, K., Y Born, J. Sleep's benefits to emotional processing emerge in the long term.

Under Revision

°Bowman, M.A., *Cunningham, T.J., *Levin-Aspenson, H. F., *O'Rear, A. E., *Pauszek, J. R., *Ellickson-Larew, S., *Martinez, B. S. & **Payne, J.D.** Differential associations of anxious and depressive symptoms with prospective memory performance using a tripartite model framework.

°Vargas, I., **Payne, J.D.**, Kuhlman, K.R., Muench, A., & Lopez-Duran, N.L. Nocturnal Wakefulness and the selective consolidation of emotional memories.

In Press

2018

Cunningham, T.J., Leal, S.L., Yassa, M.A., & **Payne, J.D.** (2018). Post-encoding stress enhances mnemonic discrimination of negative stimuli. *Learning & Memory*, 25, 611-619, <http://www.learnmem.org/cgi/doi/10.1101/lm.047498.118>.

Alger, S.E., Chen, S., & **Payne, J.D.** (2018). Do Different Salience Cues Compete for Dominance in Memory over a Daytime Nap? *Neurobiology of Learning and Memory*, <https://doi.org/10.1016/j.nlm.2018.06.005>

Alger, S.E., & **Payne, J.D.** (2018). Preferential consolidation of emotionally salient information during a nap is preserved in middle age. *Neurobiology of Aging*, 68, 34-47

Payne, J. D., & Kensinger, E. A. (2018). Stress, sleep, and the selective consolidation of emotional memories. *Current Opinion in Behavioral Sciences*, 19, 36-43. <http://dx.doi.org/10.1016/j.cobeha.2017.09.006>

2017

*Pardilla-Delgado, E., & **Payne, J.D.** The impact of sleep on true and false memory across long delays. *Neurobiology of Learning and Memory*, 137: 123-133. DOI: <https://doi.org/10.1016/j.nlm.2016.11.016>. *Impact Factor 3.4*

Sherman S.M., Kark S.M., Daley R.T., Hampton O.L., **Payne JD**, & Kensinger EA (2017). Stress prior to encoding affects resting state functional connectivity and emotional memory retrieval following sleep. *Sleep*, 40, 90-91.

*Pardilla-Delgado, E., & **Payne, J.D.** The Deese-Roediger-McDermott (DRM) task: a simple cognitive paradigm to investigate false memories in the laboratory. *JoVE (Journal of Visualized Experiments)*. Published online: DOI: 10.3791/54793. *Impact Factor 1.3*.

Chatburn, A., Kohler, M., **Payne, J.D.**, & Drummond, S. The effects of sleep restriction and sleep deprivation in producing false memories. *Neurobiology of Learning and Memory*. 137 (2017) 107–113; DOI: 10.1016/j.nlm.2016.11.017. *Impact Factor 3.4*.

2016

*Pardilla-Delgado, E., +Alger, S.E., *Cunningham, T.J., °Kinealy, B., & **Payne, J.D.** Effects of post-encoding stress on performance in the DRM false memory paradigm. *Learning & Memory*, 23: 46-50. DOI: <http://www.learnmem.org/cgi/doi/10.1101/lm.039354.115>. *Impact Factor: 4.3*

+Alger, S.E., & **Payne, J.D.** Differential effects of emotional salience on direct associative and

relational memory during a nap. *Cognitive, Affective and Behavioral Neuroscience (CABN)*. Published online, DOI: 10.3758/s13415-016-0460-1. *Impact Factor: 3.2*

Bennion, K. A., **Payne, J. D., & Kensinger, E. A. The impact of napping on memory for future-relevant stimuli: Prioritization among multiple salience cues. *Behavioral Neuroscience*, 130(3): 281-289. DOI: <http://dx.doi.org/10.1037/bne0000142> Impact Factor: 2.7.

Bennion, K. A., **Payne, J. D., & Kensinger, E. A. Residual effects of emotion are reflected in enhanced visual activity after sleep. *Cognitive, Affective and Behavioral Neuroscience (CABN)*. Published online: DOI: 10.3758/s13415-016-0479-3. *Impact Factor: 3.2*

2015

Payne, J.D., Kensinger, E.A., Schacter, D.L.,⁺Alger, S., Wamsley, E., & Stickgold, R. A daytime nap preferentially promotes emotional memory formation. *Emotion*, Vol 15(2), Apr 2015, 176-186. <http://dx.doi.org/10.1037/a0038683> DOI: 10.1037/a0038683. Impact Factor: 3.4.

⁺Alger, S.E., *Chambers, A.C., *Cunningham, T. & **Payne, J.D.** The role of sleep in human declarative memory consolidation. *Current Topics in Behavioral Neurosciences. Impact Factor 2.71*. [Curr Top Behav Neurosci](http://dx.doi.org/10.1007/7854_2014_341). 2015;25:269-306. doi: 10.1007/7854_2014_341

Bennion, K.A., Mickley Steinmetz, K.R., & Kensinger, E.A. & **Payne, J.D. Sleep and cortisol interact to support memory consolidation. *Cerebral Cortex*, Mar;25(3):646-57. DOI: 10.1093/cercor/bht255. Impact Factor: 8.3

Blaxton, J., Bergeman, C., Whitehead, B., Braun, M., & **Payne, J.D. Relationships among nightly sleep quality, daily stress, and daily affect. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences 2015*; DOI: 10.1093/geronb/gbv060. Impact Factor: 3.2

Bennion, K. A., **Payne, J. D., & Kensinger, E. A. (2015). Selective effects of sleep on emotional memory: What mechanisms are responsible? *Translational Issues in Psychological Science, Vol 1(1)*, Mar 2015, 79-88
DOI: <http://dx.doi.org/10.1037/tps0000019> (no Impact Factor available yet).

2014

*Cunningham, A., Crowell, C, ⁺Alger, S.E., Villano, M, *Mattingly, S, & **Payne, J.D.** Sleep's role in the depotentiation of psychophysiological reactivity and its relationship to subsequent memory. *Neurobiology of Learning and Memory*, 114, 155-164. Impact Factor: 4.035.

*Cunningham, T. J., Chambers, A. M., & **Payne, J. D.** Prospection and emotional memory: how expectation affects emotional memory formation following sleep and wake. *Frontiers in Psychology*, 5.

Bennion, K. A., Steinmetz, K. R. M., Kensinger, E. A., & **Payne, J. D. (2014). Eye tracking, cortisol, and a sleep vs. wake consolidation delay: Combining methods to uncover an interactive effect of sleep and cortisol on memory. *JoVE (Journal of Visualized Experiments)*, (88), e51500-e51500.

*Chambers, A. M. & **Payne, J. D.** Neural plasticity and learning: The consequences of sleep. *AIMS Neuroscience*, 1(2), 150-155. DOI: 10.3934/Neuroscience.2014.2.150.

2013

*Chambers, A., and **Payne, J.D.** Laugh yourself to sleep: Memory consolidation for humorous information. *Experimental Brain Research*, first published online December 12, 2013, DOI 10.1007/s00221-013-3779-7. Impact Factor: 2.2

*Chambers, A. M. & **Payne, J. D.** The influence of sleep on the consolidation of positive emotional memories: Preliminary evidence. *AIMS Neuroscience*, 1(1), 39-51. DOI: 10.3934/Neuroscience2014.1.39.

2012

Payne, J.D., *Chambers, A., & Kensinger, E.A. Sleep promotes lasting changes in selective memory for emotional scenes. *Frontiers in Integrative Neuroscience*, 6(108). doi: 10.3389/fnint.2012.00108.

Payne, J.D., Tucker, M.A., Ellenbogen, J.M., Walker, M.P., Schacter, D.L. & Stickgold, R. (2012). Memory for semantically related and unrelated declarative information: The benefit of sleep, the cost of wake. *PLoS ONE*, 7(3), e33079. Impact Factor: 4.1

2011

Payne, J.D. & Kensinger, E.A (2011). Sleep leads to qualitative changes in the emotional memory trace: Evidence from fMRI. *Journal of Cognitive Neuroscience*, 23(6), 1285-1297. Impact Factor: 4.5

Steinberger, A., **Payne, J.D.**, & Kensinger, E.A. (2011). The effect of cognitive reappraisal on the emotional memory trade-off. *Cognition and Emotion*, 25(7), 1237-1245. Impact Factor: 2.8

#Hoscheidt, S.M, Nadel, L., **Payne, J.D.**, & Ryan, L (2011). Hippocampal activation during retrieval of spatial context from episodic and semantic memory. *Behavioural Brain Research*, 212, 121-132. Impact Factor: 3.3

Payne, J.D. (2011). Learning, memory and sleep in humans. *Sleep Medicine Clinics*, 6(1), 15-30.

2010

Payne, J.D. (2010). Memory consolidation, the diurnal rhythm of cortisol, and the nature of dreams: A new hypothesis. *International Review of Neurobiology*, 92, 101-136. Impact Factor: 2.4

#Tamminen, J., **Payne, J.D.**, Stickgold, R., Wamsley, E.M. and Gaskell, M. (2010). Sleep spindle activity is associated with the integration of new memories and existing knowledge. *Journal of Neuroscience*, 30(43), 14356-14360. Impact Factor: 7.1

Waring, J.D., **Payne, J.D.**, Schacter, D.L., & Kensinger, E.A (2010). Impact of individual differences upon emotion induced memory trade-offs. *Cognition & Emotion*, 24, 150-167. Impact Factor: 2.8

Payne, J.D. & Kensinger, E.A (2010). Sleep's role in the consolidation of emotional episodic memories. *Current Directions in Psychological Science*, 19(5), 290-295. Impact Factor: 4.2

Wamsley, E.J., Tucker, M.A., **Payne, J.D.**, & Stickgold, R. (2010). A brief nap is beneficial for human route learning: the role of initial skill level and EEG spectral power. *Learning and Memory*, 17, 332-336. Impact Factor: 4.1

Wamsley, E.J., Tucker, M.A., **Payne, J.D.**, & Stickgold, R. (2010). Dreaming of a learning task is associated with enhanced sleep-dependent memory consolidation. *Current Biology*, 20(9), 850-855. Impact Factor: 9.5

2009

Payne, J.D., Schacter, D.L., Tucker, M.A., Wamsley, E., #Huang, L., Walker, M.P., & Stickgold, R. (2009). The role of sleep in false memory formation. *Neurobiology of Learning and Memory*, 92, 327-334. Impact Factor: 3.4

2008

Payne, J.D., Stickgold, R., #Swanberg, K., & Kensinger, E.K. Sleep preferentially enhances memory for emotional components of scenes (2008). *Psychological Science*, 19(8), 781-788. Impact Factor: 4.5

2007

Payne, J.D., Jackson, E.D., #Hoscheidt, S., Ryan, L., Jacobs, W.J. & Nadel, L. (2007). Stress administered prior to encoding impairs neutral but enhances emotional long-term episodic memories. *Learning & Memory*, 14, 861-868. Impact Factor: 4.1

Ellenbogen, J.M., Hu, P., **Payne, J.D.**, Titone, D. & Walker, M.P. (2007). Human relational memory requires time and sleep. *Proceedings of the National Academy of Sciences*, *104*, 7723-7728. Impact Factor: 9.7

2006

Payne, J.D., Jackson, E.D., Ryan, L. #Hoscheidt, S., Jacobs, W.J., & Nadel, L. (2006). The impact of stress on memory for neutral vs. emotional aspects of episodic memory. *Memory*, *14(1)*, 1-16. Impact Factor: 1.6

Ellenbogen, J.M., **Payne, J.D.**, & Stickgold, R. (2006). Sleep's role in declarative memory consolidation: Passive, permissive, active or none? *Current Opinion in Neurobiology*, *16*, 716-722. Impact Factor: 7.3

Jackson, E.D., **Payne, J.D.**, Nadel, L. & Jacobs, W.J (2006). Stress differentially modulates fear conditioning in healthy men and women. *Biological Psychiatry*, *59*, 516-522. Impact Factor: 9.2

2005 and Prior

Payne, J.D. & Nadel, L. (2004). Sleep, dreams and memory consolidation: The role of the stress hormone cortisol. *Learning & Memory*, *11*, 671-678. Impact Factor: 4.1

Payne, J.D., Nadel, L., Allen, J.J.B., Thomas, K.G.F. & Jacobs, W.J. (2002). The effects of experimentally induced stress on false recognition. *Memory*, *10*, 1-6. Impact Factor: 1.6

Nadel, L. & **Payne, J.D.**, Jacobs, W.J. (2002). The relationship between episodic memory and context: Clues from memory errors made while under stress. *Physiological Research*, *9*, 74-89. Impact Factor: 1.5

Deutsch, F.M., Servis, L. J. & **Payne, J. D.** (2001). Paternal participation in childcare and its effects on children's self-esteem. *Journal of Family Issues*, *22*, 1000-1024. Impact Factor: 1.3

JOURNAL ARTICLES – INVITED AND EDITED

Payne, J.D. (2014). The (gamma) power to control our dreams. *Nature Neuroscience*, *17(6)*, 753-755. Impact Factor: 14.976

Payne, J.D. (2014). Seeing the forest through the trees. *SLEEP*, *37 (6)*, 1029-1031. Impact Factor: 5.1.

Payne, J.D. (2011). Sleep on it: Stabilizing and transforming memories during sleep. *Nature Neuroscience*, *14(3)*, 272-274. Impact Factor: 15.2

JOURNAL ARTICLES – OTHER

Payne, J.D., and Walker, M.P (2009). Does delta sleep matter? *Insomnia and its optimal management*, 10, 3-10.

Payne, J.D., Britton, W.B., Bootzin, R.B., & Nadel, L. (2005). Beyond acetylcholine: Next steps for sleep and memory research. *Behavioural Brain Sciences*, 28, 77. Impact Factor: 25.1

BOOK CHAPTERS

In Press, Published

Payne, J.D. In Press. Stress and sleep interact to selectively consolidate and transform negative emotional memories: Implications for Clinical Treatment. In: *Neuroscience of Enduring Change: Implications for Psychotherapy*. Oxford University Press

Cunningham, T., & **Payne, J.D.** (2017). Emotional memory consolidation during sleep. In: *Cognitive Neuroscience of Memory Consolidation*, pp.133-159, DOI: 10.1007/978-3-319-45066-7_9

+ Alger, S.E., Pardilla-Delgado, E., Mattingly, S.M., Cunningham, T.J., & **Payne, J.D.** (2017). The Cognitive psychology of sleep and memory. In: *Learning & Memory: A Comprehensive Reference (2nd Ed., Vol. 4)*. DOI: 10.1016/B978-0-12-809324-5.21062-6

+Alger, S.E., & **Payne, J.D.** (2016). Sleep and Memory. In: *The Stevens' Handbook of Experimental Psychology and Cognitive Neuroscience (4th Ed., Vol. 1)*.

*Pardilla-Delgado, E., *Mattingly, S.M., +Alger, S.E., *Chambers, A., *Cunningham, T. & **Payne, J.D.** (2015). Sleep's role in the consolidation and integration of declarative memories. In M. Sakakibara & E. Ito (Eds.), *Memory Consolidation*. Nova Science Publishers: New York.

*Chambers, A. M. & **Payne, J. D.** The memory function of sleep: How the sleeping brain promotes learning. (2015) In A. Duarte, M. Barense, & D. R. Addis (Eds.), *The Wiley Blackwell Handbook on the Cognitive Neuroscience of Memory*. Hoboken, NJ: Wiley-Blackwell. (Peer-reviewed)

*Cunningham, T., *Pardilla-Delgado, E., Alger, S.E., & **Payne, J.D.** (2014). The role of REM sleep in emotional memory and affective reactivity in humans. In: *REM Sleep: Characteristics, Disorders and Physiological Effects*.

+Alger, S., *Chambers, A., *Cunningham, T., & **Payne, J.D.** (2014). The role of sleep in human memory consolidation. In: *Sleep, Neuronal Plasticity and Brain Function*, Springer. DOI 10.1007/7854_2014_341

*Chambers, A. M., Alger, S., *Cunningham, A., & **Payne, J. D.** (2014). The role of sleep in human declarative memory consolidation. In P. Meerlo, R. Benca, & T. Abel (Eds.), *Sleep, Neuronal Plasticity, and Brain Function*. Current Topics in Behavioral Neuroscience. Berlin, Germany: Springer. DOI 10.1007/7854_2014_341.

#Hoscheidt, S. M., **Payne, J.D.**, Dongaonkar, B. & Nadel, L. Emotion, stress and memory (2010). In *The Oxford Handbook of Cognitive Psychology*, Reisberg (Ed). New York: Oxford University Press, Oxford, UK.

Payne, J.D., Ellenbogen, J.M., Walker, M.P., & Stickgold, R. (2008). The role of sleep in memory consolidation. In, *Learning and Memory: A Comprehensive Reference and Concise Learning and Memory: The Editor's Selection (John H. Byrne, Ed)*, pp 547-569. Elsevier Press. Oxford UK.

Payne, J.D., Nadel, L., Britton, W.B. & Jacobs, W.J. (2004). The biopsychology of trauma and memory. In *Emotion and Memory*, pp. 76-128, D. Reisberg and P. Hertel (Eds.). Oxford, UK: Oxford University Press.

Nadel, L. & **Payne, J.D.** (2002). The hippocampus, wayfinding, and episodic memory. In P. Sharp (Ed.). *The neural basis of navigation: Evidence from single cell recording* (pp. 235-247). Boston: Kluwer Academic Publishers.

TEACHING EXPERIENCE

University of Notre Dame

- 2014- Student-Driven Seminar on Sleep and Stress: Cognition, Development, Psychopathology and Beyond (graduate level seminar)
- 2010- The Sleeping Brain (seminar)
- 2010- Introduction to Cognitive Neuroscience (lecture)

Harvard University

- 2006-2009 Neurobiology 95hjf, The Sleeping Brain (seminar)

University of Arizona

- 2001-2004 Human Memory (lecture)

Sample Guest Lectures

- Fall, 2016 Stress and Stress Hormones, Dr. Michelle Wirth, University of Notre Dame (Stress and memory)
- Fall, 2010 Biological Psychology, Dr. Michelle Wirth, University of Notre Dame (Sleep and memory)
- Fall, 2008 Cognitive Neuroscience, Dr. Sue Corkin, MIT (The effect of sleep and stress on human memory)
- Spring, 08 Topics in Cognitive Neuroscience, Dr. Jessica Andrews, Harvard University (Sleep and memory)

Laboratory Instructor (Mount Holyoke College)

1998-1999 Statistics
1997-1998 Experimental Methods

Teaching Assistantships

2003 Human Perception (University of Arizona)
2002 Psychology of Gender (University of Arizona)

MENTORING EXPERIENCE

GRADUATE AND POSTDOCTORAL MENTORSHIP

2012- Postdoctoral Advisor, Dr. Sara Alger, University of Notre Dame (*now a research scientist at Walter Reed in DC, where she runs the sleep research laboratory*)
2012- Graduate Student Advisor, Stephen Mattingly, University of Notre Dame (*now a postdoc at Notre Dame*)
2011- Graduate Student Advisor, Enma Pardillo-Delgado, University of Notre Dame (*now a postdoc at Harvard Medical School*)
2011- Graduate Student Advisor, Tony Cunningham, University of Notre Dame (*now doing his clinical internship at the VA in St. Louis, will be starting a postdoc at Harvard Medical School next year*)
2010-2015 Graduate Student Advisor, Alexis Chambers, University of Notre Dame (*now an assistant professor of Psychology at North Central College*)
2008-2009 Master's thesis project advisor, Harvard Medical School: Jakke Tamminen
2006-2007 Master's thesis project advisor, Harvard Medical School: Mahssa Karimi

UNDERGRADUATE MENTORSHIP

2017-2018 Honor/Thesis Advisor, Makenzie Huguet, Rosemary Pfaff, Adam Uppendahl,
2016-2017 Honors/Thesis Advisor, Andi Phillips, Natalie Pottschmidt, Michael Broderick
2015-2016 Honors/Thesis Advisor, Marissa Bowman, Michelle Williams
2015-2016 Senior Thesis Advisor, Shirley Chen, Anna Marie Nguyn
2013-2014 Honors/Thesis Advisor, Michael Dai, Andrea Rabassa, Patrick Samuels
2012-2013 Honors/Thesis Advisor, Jennifer Rawding, Brian Kinnealy, Eric Stumpf, Christina Rogers, Rebecca Tracy
2011-2012 Honors Thesis Advisor, Bridget Quinn, Chris Stare, Brooke Reid, Univ Notre Dame
2010-2011 Honors Thesis Advisor, Stephen Mattingly, University of Notre Dame
2008-2009 Undergraduate honors thesis advisor, Erin Miles, Harvard University: "The Role of Sleep in Reality Monitoring and Emotional False Memory Formation"
2008-2009 Undergraduate honors thesis project co-advisor, Alison Wagoner, Boston College: "Rapid Eye Movement Sleep and Emotional Memory Consolidation"
2008 Undergraduate summer research fellowship advisor, Sara Teicholtz, Wellesley College: "Relaxed Wakefulness vs. Sleep: Effects on Memory Consolidation"
2008 Undergraduate summer research fellowship advisor, Harvard University: Kyle Gibler, "The Polysomnological Correlates Memory for Semantically Related and Unrelated Word lists Following Sleep". Kyle was awarded both Harvard's PRISE and Herschel Smith Fellowships for this proposal.

- 2007-2008 Undergraduate honors thesis project advisor, Harvard University: Li-Wen Huang, “The Effect of a Brief Daytime Nap on the Consolidation of Declarative Memories”. This thesis won the Harvard Hoopes Prize, which is a University-wide thesis award for excellence in research. The student receives \$2,500 and the supervisor receives \$700
- 2006-2007 Undergraduate research supervisor, Harvard University
- 2001-2005 Undergraduate research advisor, University of Arizona

HIGHSCHOOL AND OTHER MENTORSHIP

- 2012-2013 High School Student Research Advisor, Pooja Patel (currently at Columbia University)
- 2002-2004 High School student research advisor, University of Arizona
- 2003-2005 High School research project advisor
- 1994-1995 Peer Advisor, Writing Center, University of San Diego
- 1994-1993 Peer Counselor, University of San Diego

UNIVERSITY LEADERSHIP ROLES/SERVICE

University of Notre Dame

- 2016-2018 Member, Provost’s committee on Teaching
- 2016-2018 Member, Joyce Teaching Award Committee
- 2016-2017 Psychology Department Diversity Committee
- 2016-2017 Co-Director, CBB program, Psychology
- 2016-2017 Faculty member, Student Well-Being Coalition (through the McDonald Center for Student Wellness)
- 2016 Speaker, “The Neuroscience of Learning Well”, Address given to incoming law class of 2016-2017, Law School
- 2015 Speaker, Notre Dame Undergraduates, “Sleep Well to Learn Well” (given twice in 2015)
- 2015-2017 Undergraduate Studies Committee
- 2015-2017 College Council Member
- 2015 Cognition, Brain, & Behavior Hiring Committee
- 2015-2016 Neuroscience and Behavior Steering Committee Member
- 2015 Clinical Handbook Committee Member
- 2014 Member, Hiring Committee, Director of Undergraduate Studies, Neuroscience and Behavior
- 2014 Speaker, “Nearly Tenured Faculty: The Notre Dame Experience”, New Faculty Orientation
- 2012 Member, Clinical area graduate applications committee
- 2012-2013 Member, Undergraduate studies committee, Psychology Dept, Notre Dame
- 2011-2012 Member, Notre Dame working group on Human Nature (with Agustin Fuentes, funded by the John Templeton Foundation grant “The Human Nature(s) Project”). 2011
- 2011 Speaker, “Sleep for Students”, Psychology Club
- 2010 Kaneb Center Panel Member, Navigating the Academic Job Market

- 2010 Departmental Hiring Committee (Position in Behavioral Oncology, Department of Psychology)
- 2010 Co-Founder, Conversations in Brain, Mind and Behavior (sponsored by Provost Burish)
- 2010-2017 Co-Director, CBB graduate studies committee
- 2010-2011 College Council, University of Notre Dame
- 2010-2014 ND/BC Cognitive Neuroscience Exchange Program (allows undergraduate students from Notre Dame to spend the summer at Boston College learning fMRI, and Boston College students to spend the summer at Notre Dame learning sleep EEG/PSG)
- 2010 Judge, Siemens Math Science and Technology Regional Competition, University of Notre Dame
- 2009-2017 Co-Supervisor, Student Neuroscience Club (Student Brain, Mind and Behavior)
- 2009 Departmental Colloquium Committee (Dept of Psychology)

University of Arizona

- 2003 Graduate student representative for the Cognitive Psychology hiring committee
- 2002 Departmental representative to Graduate Student Council
- 2003 Co-organizer, prospective student weekend
- 2003 Co-organizer, weekly memory meeting

OTHER DEPARTMENTAL SERVICE

Masters thesis committee member: University of Notre Dame

- Nick Yeh (2018-2019)
- Molly O’Neill (2018-2019)
- Brandy Martinez (Clinical Program, University of Notre Dame)
- Julia Paulson (Clinical Program, University of Notre Dame)
- Julaine Zenk (CBB Program, University of Notre Dame)
- Allison Gaffey (Clinical Program, University of Notre Dame)
- Sabine Krawietz (Cognitive Program, University of Notre Dame)

Prelims committee member: University of Notre Dame

- Brandy Martinez (2018-2019)
- Molly O’Neill (2018-2019)
- Sabine Krawietz (Cognitive Program, University of Notre Dame)
- Andrea Tamplin (Cognitive Program, University of Notre Dame)
- Anne Thompson (Clinical Program, University of Notre Dame)

Dissertation committee member: University of Notre Dame and other

- Jerry Fisher (2018-2019)
- Alix Mellor (Psychiatry Program, University of Western Australia)
- Andrea Tamplin (Cognitive Program, University of Notre Dame)
- Elizabeth Hendricks (Clinical Program, University of Notre Dame)
- Anne Thompson (Clinical Program, University of Notre Dame)
- Sabine Krawietz (Cognitive Program, University of Notre Dame)

Marcia Braun (Developmental Program, University of Notre Dame)
Windy McNerny (Cognitive Program, University of Notre Dame)
Goali Auzeen Saedi (Clinical Program, University of Notre Dame)
Alissa Russel (Developmental Program, University of Notre Dame)
Matthew Tucker (doctoral dissertation, City College, NYC)
Erin Wamsley (doctoral dissertation, City College, NYC)

PROFESSIONAL SERVICE

2017-present Associate Editor, *Journal of Experimental Psychology: General*
2017-present Associate Editor, *Journal of Sleep Disorders and Medical Care*
2010-present Editorial Board Member, *Frontiers in Sleep and Chronobiology*
2016 Cognitive Neuroscience Trainee Professional Development Panel, *Cognitive Neuroscience Society*
2013-present Board Member, Start School Later (created to move high school start times forward nation-wide)
2012-present Neuroscience Advisory Board, *Neuroleadership Institute*
2009-2013 Educational Programs Committee Member, *Sleep Research Society*
2009-2015 Medical Advisory Board, *Humana*

Ad Hoc Reviewer: *American Journal of Psychiatry* • *Applied Cognitive Psychology* • *Behavioural Brain Research* • *Behavioral Neuroscience* • *Biology of Mood and Anxiety Disorders* • *Biological Psychiatry* • *Cerebral Cortex* • *Cognitive, Affective and Behavioral Neuroscience (CABN)* • *Cognition* • *Cognition and Emotion* • *Consciousness and Cognition* • *Current Biology* • *Current Opinion in Psychological Science* • *Developmental Science* • *Emotion* • *Experimental Brain Research* • *European Journal of Neuroscience* • *Future Neurology* • *Journal of Clinical Psychiatry* • *Journal of Cognitive Neuroscience* • *Journal of Neuroscience* • *Journal of Physiology* • *Learning and Memory* • *Memory* • *Nature Communications* • *Nature Behavior* • *Nature Neuroscience* • *Neurobiology of Learning and Memory* • *Neurobiology of Aging* • *Neuron* • *Neuroscience* • *Neuroscience and Biobehavioral Reviews* • *Perspectives on Psychological Science* • *PLoS ONE* • *Physiology and Behavior* • *Psychological Bulletin* • *Psychological Science* • *Psychological Review* • *Psychoneuroendocrinology* • *Psychonomic Bulletin and Review* • *Scientific Reports* • *SLEEP* • *Sleep Medicine* • *Social, Cognitive and Affective Neuroscience (SCAN)* • *Social & Personality Psychology Compass* • *Stress* • *Trends in Neuroscience* • *Wiley Interdisciplinary Reviews: Cognitive Science*

Grant Reviewer (Ad Hoc):

2013 *National Science Foundation* (Open Research Area for the Social Sciences)
2013 *Netherlands Organization for Scientific Research*, The dynamic nature of emotional memory: toward a network understanding of emotional memory consolidation
2012 *National Science Foundation* (Cognitive Neuroscience)
2010 *Netherlands Organization for Scientific Research*, Making Memories, Replay or Decay
2010 *National Science Foundation* (Cognitive Neuroscience)

2010 *National Science Foundation (Perception, Action and Cognition)*
2009 *South African Research Council, The relationship between cortisol and dreaming
in patients taking corticosteroid medications*

PROFESSIONAL MEMBERSHIPS

Psychonomic Society (Fellow) • Association for Psychological Science (APS) • Cognitive Neuroscience Society • International Neuropsychological Society • Society for Neuroscience • Society for Sleep Research • International Organization for Psychophysiology • International Brain Research Organization

KEYNOTE ADDRESSES

Psychology/Neuroscience

Sleep and Stress Interact to Influence Emotional Memory Consolidation. International Association for the Study of Sleep and Dreaming (IASD), Virginia Beach, VA (June, 2015)

Neuroscience of Leadership

Leading with the Brain in Mind: Sleep for Productivity. Neuroleadership Summit, Sydney, Australia (June, 2013).

MPG – A Brain Based Model for Leadership: Moderate Stress, Positive Affect, Good Sleep. Neuroleadership Summit, London, England (September, 2013)

MPG – A Brain Based Model for Leadership: Moderate Stress, Positive Affect, Good Sleep. Neuroleadership Summit, Washington DC (November, 2013).

SYMPOSIUM ORGANIZER and CHAIR

Selective Memory Consolidation During Sleep. Association for Psychological Science (APS), San Francisco, CA (May, 2014).

Sleep-Based Consolidation of Hippocampal Memory. Hippocampal Research Conference, Verona, Italy (May 2011)

Sleep and Cognition: Findings across Domains. Association for Psychological Science, Washington D.C (May, 2007)

INVITED TALKS

Stress-related Neuromodulators Interact with REM Sleep Theta Activity to Benefit Memory Consolidation. Presented at the Advances in Sleep and Circadian Science meeting. Clearwater, FL (February, 2019).

Sleep-Stress Interactions in the Consolidation of Emotional Memories: A New Memory Tagging Hypothesis. Presented at the University of Arizona, in a lineup including two Nobel Prize laureates, John O'Keefe and May-Britt Moser (December, 2017).

Sleep and the Brain. Why do we need sleep? Presented at the National Academy of Sciences' Frontiers of Science symposium in Bad Neuenahr, Germany (September, 2017).

Sleep, Stress Hormones, and Emotional Memory Tagging. The Werner Reichardt Centre for Integrative Neuroscience (CIN). University of Tübingen, Germany (Fellowship Address, October, 2016).

From Synaptic to Systems Consolidation. Federation of Latin-American and Caribbean Societies for Neuroscience. (October, 2016).

Stress-Related Synaptic Tagging During Learning and Downstream Sleep-Based Memory Consolidation. Departmental Colloquium, Brown University (April, 2016)

Stress Hormones, Sleep, and Memory for Better and for Worse. Psychology Department Colloquium, Furman University (Feb, 2016)

Emotional Memory Consolidation. Psychology Department Colloquium, UT Austin (Nov 2015)

Sleep, Memory, and the Brain. EDRT, Boston University (November, 2015).

The Neuroscience of Leadership. Mendoza Business School. University of Notre Dame, Notre Dame, IN (October, 2015).

Sleep, Stress, and Memory Function. Colloquium at Walter Reed, Washington D.C. (March, 2015).

Sleep, Stress and Emotional Memory Consolidation. Summer Institute in Cognitive Neuroscience. Santa Barbara, CA. (July, 2014)

Sleep and Cognition. Annual Meeting of the Sleep Research Society, Meet the Professor Series, Minneapolis, MN (June, 2014)

Sleep, Stress and Memory Consolidation. Departmental Seminar, Saint Louis University, Saint Louis, Missouri (April, 2014).

Sleep, Stress, and Emotional Memory Consolidation. Departmental Colloquia. Department of Psychology, University of Arizona (Feb, 2014).

Sleep's Role in Cognitive Function. Department of Psychology Seminar, Georgetown University (November, 2013).

Sleep, Memory and the Teenage Brain. Invited Lecture at the Sleep in Teens Conference, Minneapolis, MN (October, 2013).

Sleep Well to Lead Well. Mendoza College of Business Executive Integral Leadership Program. Notre Dame, IN (July, 2013).

Sleep to Remember. Learning: From Cells to Society. Cognitive Science Program, Georgetown University, Washington D.C. (March, 2013)

Sleep and the Business Mind. Mendoza College of Business Executive Integral Leadership Program. Notre Dame, IN (January, April, 2013).

Leading with the Brain in Mind. Future Leaders Conference. Chicago, IL. (September, 2012)

The Innovative Brain. ASTD. Denver, Colorado (May, 2012).

Sleep and the Transformation of Memories for Emotionally Negative Events. Winter Conference on Memory. Lübeck, Germany (December, 2011).

The Senior Executive Brain: What can Neuroscience Teach us about Leading Well? Neuroleadership Summit. San Francisco, CA (November, 2011).

Sleep, Dreams, Memory: Lingering Questions. Symposium I: Young Innovators in Psychology. Cape Cod, MA. (June, 2011).

Sleep, Stress and Positive Affect: What Business Leaders Need to Know about the Brain. Center for Creative Leadership, Greensborough, NC (May, 2011)

Sleep Restructures the Emotional Memory Trace: Behavioral and Neural Evidence. Laird Cermak Award Address, International Neuropsychological Society (INS), Boston, MA (January, 2011).

Sleep, Memory Transformation, and Creativity. Cognitive/Cognitive Neuroscience Brown Bag, Purdue University (Dec 2010)

The Neural Challenges of the Senior Leader. Neuroleadership Summit. Boston, MA (November, 2010)

Where Business Meets Neuroscience. Humana, INC. Louisville, KY (October, 2010)

Emotional Memory, Stress and Sleep. Massachusetts Institute of Technology (MIT) conference on Learning and Memory in the Modern Age (January, 2010)

Sleep's Role in Memory Consolidation. Departmental Colloquium, Stony Brook University (May, 2009)

Sleep and Memory Transformation. Cognitive Brown Bag, UMASS Amherst (April, 2009)

Sleep Selectively Enhances Emotional Components of Scenes. International Congress on Psychology, Berlin, Germany (July, 2008)

Emotional Memory, Sleep and Dreaming. Association for the Study of Dreams, Montreal, Canada (July, 2008)

Stress Damages the Mind, Body and Brain, Humana, Inc., Louisville, KY (April, 2008)

Sleep-based Memory Consolidation, Worcester State College, Worcester, MA (March, 2008)

Sleep for Memory Consolidation and Memory Transformation (Job Talks)

Harvard University (November, 2008)

Lehigh University (November, 2008)

Ohio State, OH (November, 2008)

University of Denver (December, 2008)

University of Calgary (December, 2008)

UC Santa Cruz (December, 2008)

University of Miami (January, 2009)

University of Notre Dame (January, 2009)

Macalester College (January, 2009)

Sleep on it! There's more to it than just the old adage, Humana Inc., Louisville, KY (January, 2008); Knowledge Leadership Forum, Cambridge, MA (January, 2008); Ketchum, Inc., New York City (March, 2008); Intelligence Leadership Forum, Amelia Island, Florida (February, 2008)

Sleep, Cognitive Flexibility, and Qualitative Changes in Memory. International Neuropsychological Society, Mati, Greece (June, 2007)

Stressing Memory. Boston College (March, 2007)

Stress, Cortisol, the Catecholamines, and Human Memory Function. Harvard Medical School Neurophysiology Seminar (September, 2005)

To Sleep or Perchance to Dream: Memory, Cortisol and the Nature of Dreams. MDRS, Chicago, IL (Oct, 2004)

Stress and Binding in Various Forms of Episodic Memory. University of Arizona Brain, Behavior and Computation Seminar. (November, 2003)

PROFESSIONAL TALKS (past 5 years)

Preferential Emotional Memory Consolidation is Preserved in Middle Age. Cognitive Neuroscience Society. Boston, MA (March, 2018).

Sleep-Stress Interactions in Emotional Memory Formation. Winter Conference on the Neurobiology of Memory. Park City, Utah. (January, 2017).

Stress Hormones, REM Sleep, and Memory Consolidation. Federation of Latin-American and Caribbean Societies for Neuroscience. Buenos Aires, Argentina (November, 2016).

Preferential Consolidation of Emotional Components of Memory During a Nap is Preserved with Age. Annual Meeting of the Psychonomics Society (November, 2016)

Sleep, Stress Hormones, and Emotional Memory Tagging. Meeting of the International Organization of Psychophysiology. Havana, Cuba (September, 2016).

Memory Consolidation During Sleep. Annual Meeting of the Association for Psychological Science. New York, New York (May 2015)

The Cognitive Neuroscience of Memory Consolidation. International Brain Research Organization, Rio, Brazil (June, 2015)

Memory Consolidation: Interactive Relationships Between Sleep and Stress. Annual meeting of the Psychonomics Society. Long Beach, CA (November, 2014).

Start School Later (Learning and Memory Perspectives). Sleep Research Society/APSS. Minneapolis, MD (June, 2014).

Stress, Sleep, and Emotional Memory Consolidation. Association for Psychological Science. San Francisco, CA (May, 2014).

Sleep, Stress and Emotional Memory Consolidation. Cognitive Neuroscience Society. Boston, MA (April, 2014).

Memory Consolidation During Sleep. Trainee Day. Sleep Research Society/APSS. Baltimore, MD (June, 2013).

Sleep Selectively Benefits Emotional Aspects of Human Memory: Behavioral and Neural Evidence. Society for Psychophysiological Research. New Orleans, LA (October, 2012).

Sleep and Emotion. Association for Psychological Science, Chicago, IL (April, 2012).

Sleep-based Emotional Memory Formation: Sleep Stage Correlates. Society for Neuroscience, Washington D.C. (November, 2011).

Sleep Transforms the Emotional Memory Trace: Behavioral and Neural Evidence. International Congress on Memory (ICOM). York, England (August, 2011).

Emotional Memory Formation and Sleep. Hippocampal Research Conference, Verona, Italy (May, 2011).

Sleep's Role in the Consolidation of Emotional Episodic Memories: Evidence from EEG and fMRI. Annual meeting of the Cognitive Neuroscience Society, San Francisco, California (April, 2011).

Sleep Triggers Lasting Changes in the Emotional Memory Trace: Evidence from fMRI,

APSS/Sleep Research Society, San Antonio, TX (June 2010).

Sleep Promotes Long-Lasting Changes in Emotional Memories, APSS/Sleep Research Society, Seattle, Washington (June 2009).

Slow-wave Sleep Correlates Negatively with a Declarative Memory Task, Sleep Research Society, Baltimore, Maryland (June, 2008).

The Impact of Sleep on Emotional Memory Trade-offs. Sleep Research Society, Minneapolis, MN. (June, 2007).

Sleep On It to Get the Gist: Memory Associations across the Night. Annual meeting of the Association for Psychological Science. Washington D.C. (2007)

Sleep increases Veridical and False Recall of Semantically Related Words. Annual meeting of the Psychonomic Society, Houston, TX (2006).

Sleep on it to get the Gist. Annual meeting of the Society for Neuroscience, Atlanta, Georgia (2006).

The Impact of Stress on Perceptual and Memorial binding: Illusory Conjunctions and False Memories. University of Arizona Memory Group (2004).

The Impact of Stress on False Recognition in the Deese Roediger McDermott (DRM) Paradigm. University of Arizona Memory Group (2002).

Memory, Distractor Tasks and the Resource Demands of Different Cognitive Tasks. Annual meeting of the Western Psychological Association. Seattle, WA (1997)

SELECTION OF SERVICE TALKS AND WORKSHOPS

The Neuroscience of Being your Best Self: What Sleep, Stress, and Emotion Research can Teach us about Leading (and Living) Well: ND Lead (April, 2016, Feb, 2018)

The Science of Stress and Sleep: How they Affect Memory, Concentration, and Creativity
Address to the ND student body, sponsored by McWell (Nov, 2017)

Sleep to be Your Best Self. Lunch and learn address to the ND staff (Feb, 2017)

Sleep for Better Performance. Address to the ND men's Lacrosse team (Feb, 2017)

Sleep to Learn, Learn to Sleep. Address to the incoming students of the Notre Dame Law School (August, 2016)

Sleep on it! Notre Dame Shares (ND Development Team). Notre Dame, IN (April 2016)

Everything you Ever Wanted to Know About Sleep (But Were Too Tired to Ask!) One Day University. Community Event. South Bend, IN (April, 2016)

Sleep to Learn; Sleep to Lead. Young Leaders of Notre Dame. Notre Dame, IN (Feb, 2016)

The Neuroscience of Leading (and Living) Well. Mendoza Business School. University of Notre Dame, Notre Dame, IN (Jan, 2016).

The Neuroscience of Leading (and Living) Well. Workshop given to the Volunteers of America. University of Notre Dame, Notre Dame, IN (October, 2014).

The Neuroscience of Being Your Best Self. Board of Trustees Spouses. University of Notre Dame. Notre Dame, IN (October, 2014).

Sleep Well to Lead Well. Mendoza College of Business Executive Integral Leadership Program. Notre Dame, IN (August, 2014).

Sleep Well to Age Well. Invited talk at the South Bend Science Café, South Bend, IN

Sleep on it! There's more to it than just the old adage. Public talk at Memorial Hospital, South Bend, IN (December, 2012).

Sleep on it! There's more to it than just the old adage. 2012 Reilly Center Forum. University of Notre Dame. Notre Dame, IN (November, 2012).

Sleep on it! There's more to it than just the old adage. Saturday Scholars. University of Notre Dame. Notre Dame, IN (October, 2012).

Sleep, Health, Memory. Memorial Hospital. South Bend, IN (June, 2012)

Sleep, Stress, and Memory: Implications for Clinical Depression. ND Development trip; Fundraising talk given in an attempt to secure Warren Foundation funding. Tulsa, OK (July, 2011).

Sleep on it! There's More to it than just the Old Adage. Mendoza College of Business Staff Development Day. Notre Dame, IN (June, 2011).

Sleep, Creativity, and the Law. University of Notre Dame Law School, Notre Dame, IN (November, 2010).

RECENT CONFERENCE PRESENTATIONS (POSTERS AND TALKS)

Yeh N., Kim, S. Y., Payne, J. D., & Rose, N. S. (2018, November). *Medial prefrontal cortex has a causal role in selectively enhanced consolidation of emotional memories: A TMS-EEG study.* Poster presentation at the Society for Neuroscience Annual Meeting, San Diego, CA.

Kim, S. Y., & Payne, J. D. (2017, November). *The role of NREM stage 2 spindles in an afternoon nap for lab-based and real-world measures of episodic memory.* Poster presentation at the Society for Neuroscience Annual Meeting, Washington, DC.

Cunningham, T., Pardilla-Delgado, E., & Payne, J. (2017). *Prospective Memory Performance Negatively Correlates with Slow-Wave Sleep Despite an Overall Enhancement Across Sleep.* Poster presentation at the Associated Professional Sleep Society Conference, Boston, MA.

Phillips, A., Cunningham, T., & Payne, J. (2017). *Targeted Memory Reactivation: Odor as a Reactivation Cue During Sleep*. Poster presentation at the Midwestern Psychological Association Annual Meeting, Chicago, IL.

Cunningham, T., Bolinger, E., Born., J., & Payne, J. (2017). *The Association of Skin Conductance Level with Emotional Memory Performance Over Time*. Poster presentation at the Cognitive Neuroscience Society Annual Meeting, Boston, MA.

Pardilla-Delgado E., Forcato C., Payne J.D. (March 2017). *Memory strengthening via multiple labilization-reconsolidation cycles: a replication study*. Cognitive Neuroscience Society Annual Meeting, San Francisco, CA USA. March 25-28, 2017.

Alger, S.E., & Payne, J.D. (Nov., 2016). Preferential consolidation of emotional components of memory during a nap is preserved with age. Selected as an Oral Presentation in the 2016 annual Psychonomic Society meeting.

Alger, S.E., & Payne, J.D. (Nov., 2016). Selective Consolidation of emotionally salient information during a nap is preserved across age. Selected as an Oral Presentation in the 2016 annual Psychonomic Society meeting.

Alger, S.E., & Payne, J.D. (June, 2016). Selective consolidation of emotionally salient information during a nap is preserved with age. Selected as a Poster Presentation in the 2016 APSS annual Sleep meeting.

Alger, S.E., & Payne, J.D. (May, 2016). Preservation of the preferential consolidation of emotionally salient information during a nap with age. Accepted as a Poster Presentation in the 2016 Association for Psychological Science annual conference.

Pardilla-Delgado E., Payne J.D. (June 2016). *Dream Reporting May Shift Memory Processing To A Gist-Like State*. Annual Meeting of the APSS, Denver, CO. June 11-15, 2016.

Pardilla-Delgado E., Asp, E.W., Cunningham, T.J., Warner, K.A., Payne J.D. (October 2016). *The effects of a stress-related cortisol increase on higher cognitive functions: false memory formation and anchoring and adjustment*. Cognitive Neuroscience Society Annual Meeting, New York, NY USA. April 1-5.

Cunningham, T., Bolinger, E., Born., J., and Payne, J.D. (2016). *Proximity to sleep alters the affective processing of emotional and neutral stimuli*. Poster presentation at the Associated Professional Sleep Society Conference, Denver, CO.

Bolinger, E., Cunningham, T., Born., J., and Payne, J.D. (2016). *Proximity to sleep alters the affective processing of emotional and neutral stimuli*. Poster presentation at the Association for Psychological Science Annual Meeting, Chicago, IL.

Bowman, M., Cunningham, T., Bolinger, E., Born., J., and Payne, J.D. (2016). *Sex Moderates the Effect of REM Sleep on Emotional Memory Consolidation*. Poster presentation at the Association for Psychological Science Annual Meeting, Chicago, IL.

Cunningham, T., Bowman, M., Ellickson-Larew, S., and Payne, J.D. (2016). *Anxiety and Poor Mood Predict Poor Prospective Memory Performance*. Poster presentation at the Association for Psychological Science Annual Meeting, Chicago, IL.

Cunningham, T., Mattingly, S., and Payne, J. (2016). *Hypothalamic-Pituitary-Adrenal Axis Activation is Necessary for the Preferential Consolidation of Emotional Memory Traces*. Poster presentation at the Cognitive Neuroscience Society Annual Meeting, New York City, NY.

Pardilla-Delgado E., Asp, E.W., Cunningham, T.J., Warner, K.A., Payne J.D. (2015). *The effects of acute psychosocial stress on higher cognitive functions: false memory formation and anchoring and adjustment*. Society for Neuroscience Annual Meeting, Chicago, IL. October 17-21.

Cunningham, T. and Payne, J. (2015). *Sleep Benefits Memory to Complete Goal-Relevant Behavior*. Society for Neuroscience Annual Meeting, Chicago, IL, USA. October 17-21.

Mattingly, S. M., Payne, J.D. (2015). *The effects of semantic relatedness on long term survival memory processing*. Society for Neuroscience Annual Meeting, Chicago IL, 10/18/15

Cunningham, T. and Payne, J. (2015). *Preliminary Evidence for the Hyperactivity of the Sympathetic Network in Depression and Anxiety*. Poster presentation at the Annual Meeting of the Society for Psychophysiological Research (SPR), Seattle, WA.

Cunningham, T. and Payne, J. (2015). *The Relationship between REM Sleep and the Cortisol Awakening Response (CAR) Following Stress Exposure*. Poster presentation at the annual Associated Professional Sleep Society Conference, Seattle, WA.

Cunningham, T. and Payne, J. (2015). *Stress reactivity enhances memory for emotional content at the cost of neutral information*. Poster presentation at the University of Notre Dame Graduate Student Symposium, Notre Dame, IN.

Cole, M., Cunningham, T., and Payne, J. (2015). *The Effect of Sleep on Skin Conductance Reactivity and Emotional Memory*. Poster presentation at the Midwestern Psychological Association Annual Meeting, Chicago, IL.

Cunningham, T. and Payne, J. (2015). *Stress reactivity enhances memory for emotional content at the cost of neutral information*. Poster presentation at the Cognitive Neuroscience Annual Meeting, San Francisco, CA.

Alger, S.E., & Payne, J.D. (2015). *The differential effects of emotional salience on direct associative and relational memory during a nap*. Selected as an Oral Presentation in the 2015 Society for Neuroscience Meeting.

Alger, S.E., & Payne, J.D. (2015). *The differential effects of emotional salience on direct associative and relational memory during a nap*. Accepted as a Poster Presentation in the 2015 APSS annual Sleep meeting.

Cunningham, T., Bolinger, E., Lathrop, Q., Born, J., and Payne, J. (2014, August). *Disentangling Sleep, Memory, and Emotion*. Poster presentation at the Memory and Consciousness-Plasticity Brain Rhythms and Sleep Summer School, Tübingen, Germany.

⁺Alger, S.E., *Chambers, A., Payne, J.D. (2014, June). *A nap rich in slow wave sleep selectively preserves emotional scene components*. Poster presented at the annual meeting of the Sleep Research Society, Minneapolis, MN.

Cunningham, T., Chambers, A., and Payne, J. (2014, June). *The effect of expectation on the selective processing of negatively arousing information across periods of wake and sleep*. Poster presentation at the annual Associated Professional Sleep Society Conference, Minneapolis, MN.

*Mattingly, S. M., Payne, J.D., Kensinger, E., +Alger, S., *Cunningham, T., Wirth, M. (2014 June) *Stress Effects on Consolidation of Emotional Memory Tradeoffs at 24 and 48 Hours*. Poster presented at the annual meeting of the Sleep Research Society, Minneapolis, MN.

⁺Alger, S.E., *Chambers, A., Payne, J.D. (2014, April). A nap rich in slow wave sleep selectively preserves emotional scene components. Poster presented at the annual meeting of the Cognitive Neuroscience Society, Boston, MA.

Chambers, A., Cunningham, T., and Payne, J. (2014, April). *The effect of future relevance on the emotional memory tradeoff after sleep and wake*. Poster presentation at the annual Cognitive Neuroscience Society Convention, Boston, MA.

Cunningham, T., Wirth, M., Pardilla-Delgado, E., Blomeke, K., Rawding, J., and Payne, J. (2014). *Alcohol's effect on the Cortisol Awakening Response*. Poster presentation at the annual Cognitive Neuroscience Convention, Boston, MA.

*Pardilla-Delgado E., Payne J.D. (2014 April) *The effect of post-encoding stress on performance in the DRM false memory paradigm*. Poster presented at the annual meeting of the Cognitive Neuroscience Society, Boston, MA.

*Pardilla-Delgado E., Payne J.D. (2013 November) *The role of sleep in long-term gist-based false memories*. Poster presented at the annual meeting of the Society for Neuroscience, San Diego, CA.

Cunningham, T., Crowell, C., Villano, M., Alger, S. E., Mattingly, S., and Payne, J. (2013, October). *Sleep's depotentiating effect on heart rate deceleration and skin conductance response*. Poster presentation at the annual Society for Psychophysiological Research Meeting, Florence, Italy.

Cunningham, T., Crowell, C., Villano, M., Alger, S. E., Mattingly, S., and Payne, J. (2013, October). *Increased heart rate deceleration at encoding predicts memory for negative items only after a night of sleep*. Poster presentation at the annual Society for Psychophysiological Research Meeting, Florence, Italy.

**Bennion, K.A., Mickley Steinmetz, K.R., Kensinger, E.A., Payne, J.D. (2013, June). *Sleep and cortisol interact to support emotional memory consolidation*. Poster presented at the annual meeting of the Sleep Research Society, Baltimore, MD.

*Chambers, A., Payne, J.D. (2013, June). If you're happy and you know it, get some zzz's: The effect of sleep on the consolidation of positive emotional memories. Poster presented at the annual meeting of the Sleep Research Society, Baltimore, MD.

*Cunningham, T., *Mattingly, S., Crowell, C., Vilano, M., Lathrop, Q., Payne, J.D. (2013, June). Psychophysiological reactivity at encoding predicts memory for negative items after a night of sleep. Poster presented at the annual meeting of the Sleep Research Society, Baltimore, MD.

*Pardilla-Delgado, E., Payne, J.D. (2013, June). The role of sleep in long term memory for gist. Poster presented at the annual meeting of the Sleep Research Society, Baltimore, MD.

Perlis, M., Berkowitz, S., Corbitt, C., Staley, B., Findley, J., Grandner, M., Payne, J.D., Sharman, R.L., Ellis, J.G. (2013, June). Explicit and implicit memory correlates of sleep state misperception. Poster presented at the annual meeting of the Sleep Research Society, Baltimore, MD.

Payne, J.D., & *Cunningham, A (2013, April). Emotional memory and psychophysiological reactivity following a night of sleep. Poster presented at the annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

**Bennion, K, Payne, J.D., Mickley Steinmetz, K.M., & Kensinger, E.A. (2013, April). The influence of resting cortisol on subsequent remembering and forgetting of emotional objects. Poster presented at the annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

**Bennion, K, Payne, J.D., Mickley Steinmetz, K.M., & Kensinger, E.A. (2013, April). Resting cortisol affects the relation between attention at encoding and activation during emotional memory retrieval. Poster presented at the annual meeting of the Social and Affective Neuroscience Society, San Francisco, CA.

°Braun, M. E., Whitehead, B.R., Bergeman, C.S., & Payne, J.D. (2012, November). Age effect on night-to-night sleep quality. Poster presented at the annual meeting of the Gerontological Society of America. San Diego, CA.

Payne, J.D., *Mattingly, S., & Kensinger, E.A. (2012, October). Stress influences consolidation of the emotional memory trade-off effect. Poster presented at the annual meeting of the Society for Neuroscience Society. New Orleans, LA.

*Cunningham, A., Crowell, C, Villano, M, *Mattingly, S, Kensinger, E.A. and Payne, J.D. (2012, June). The Effect of REM Sleep on the Emotional Memory Trade-off Effect, Cortisol Awakening Response and Psychophysiological Reactions to Negatively Rated Scenes. Poster presented at the annual meeting of the Sleep Research Society, Boston, MA.

*Chambers, A., & Payne, J.D. (2012, June). Laugh yourself to sleep: Sleep and memory for positive humorous material. Poster presented at the annual meeting of the Sleep Research Society, Boston, MA.

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*Cunningham, A., Crowell, C, Villano, M, *Mattingly, S, Kensinger, E.A. and Payne, J.D. (2012, May). Emotional memory and psychophysiological regulation following a night of sleep. Poster presented at the annual meeting of American Psychological Association, Chicago, IL.

**Bennion, K., Payne, J.D., & Kensinger, E.A. (2012, May). Effects of sleep and time of day on emotional memory retrieval: Evidence from fMRI. Poster presented at the annual meeting of the Social and Affective Neuroscience Society, New York, NY.

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MEDIA COVERAGE

How to wake up to your creativity (April, 2017)

Time Magazine

<http://time.com/4737596/sleep-brain-creativity/>

These 9 techniques will help you stop forgetting things all the time (September, 2017)

Woman's Health

<https://www.womenshealthmag.com/health/tricks-to-remember-anything>

Chances are you're stressed about this at least once a week. (June, 2017)

Huffington Post

http://www.huffingtonpost.com/entry/chances-are-youve-stressed-about-this-at-least-once-in-the-last-week_us_5908e548e4b0bb2d08729f31?45hd

A new study says sleep trackers might be making you sleep poorly. Here's what that really means. (March, 2017)

Men's Fitness

<http://www.mensfitness.com/life/gearandtech/new-study-says-sleep-trackers-might-be-making-you-sleep-poorly-heres-what-really>

Sleep on it. The brain never takes a night off (November, 2015)

Huffington Post

<http://www.huffingtonpost.com/jessica-payne-phd/>

Why missing a night of sleep can damage your IQ (April, 2015)

CNN

<http://www.cnn.com/2015/04/01/business/sleep-and-leadership/>

Your Brain on Sleep (November, 2015)

ND.EDU

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Sleep Deprivation is Killing Business and Creativity (November, 2015)

The HR Director Magazine

<https://www.thehrdirector.com/business-news/health-and-wellbeing/sleep-deprivation-killing-business-and-creativity/>

An app, a course, a nightly routine: Somni prioritizes sleep (June, 2015)

USA TODAY

<http://college.usatoday.com/2015/06/21/sleep-app-somni/>

How sleep can make you a better leader (April, 2015)

CNN

<http://edition.cnn.com/2015/04/01/business/sleep-and-leadership/index.html>

Class time or sleep time for students? (May, 2015)

South Bend Tribune

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To Keep Teenagers Alert, Schools Let Them Sleep In (March, 2014)

New York Times

http://well.blogs.nytimes.com/2014/03/13/to-keep-teenagers-alert-schools-let-them-sleep-in/?_r=0

Lack of sleep derails us all (December, 2013)

Huffington Post

http://www.huffingtonpost.com/david-rock/lack-of-care-about-sleep-_b_4441761.html

Be more creative in 4 simple steps (September, 2013)

Good Housekeeping

<http://www.goodhousekeeping.com/home/crafts/be-more-creative>

Ability to learn is affected by the timing of sleep (April, 2012)

Scientific American

<http://www.scientificamerican.com/podcast/episode.cfm?id=ability-to-learn-is-affected-by-the-12-03-24>

Sleep on it! How dozing off turns on your brain power and makes memories last (May, 2012)

YouBeauty (Dr. Oz's website)

<http://www.youbeauty.com/sleep/sleep-for-memory?page=2>

Wake-up call for teachers: Nodding off in class could actually be the best way to learn (March, 2012)

Daily Mail UK

<http://www.dailymail.co.uk/sciencetech/article-2120420/Sleeping-shortly-learning-new-best-way-remember-it.html>

Learning best when you rest: Sleeping after learning new info most effective (April, 2012)

Science Daily

<http://www.sciencedaily.com/releases/2012/03/120323205504.htm>

Night owls more likely to suffer from nightmares, survey suggests (September, 2011)

Scientific American

<http://www.scientificamerican.com/article.cfm?id=night-owls-more-likely-to-suffer-from-nightmares-survey-suggests>

Nightmares more common in those who stay up late: Bad dreams may be linked to cortisol (September, 2011)

New York Daily News

http://www.nydailynews.com/lifestyle/health/2011/09/06/2011-09-06_nightmares_more_common_in_those_who_stay_up_late_study_bad_dreams_may_be_linked_.html

What Neuroscience Can Teach Leaders (August, 2011)

Bloomberg Businessweek

http://www.businessweek.com/management/what-neuroscience-can-teach-leaders-08122011_page_2.html

Sleep Cherry-Picks Memories, Boosts Cleverness (December, 2010)

National Geographic

<http://news.nationalgeographic.com/news/2010/12/101201-sleep-memories-health-brain-science/>

Sleep Makes Your Memories Stronger, and Helps with Creativity (November, 2010)

Science Daily

<http://www.sciencedaily.com/releases/2010/11/101113165441.htm>

Sleep and do better (February, 2010)

Businessweek and MSN

<http://www.businessweek.com/lifestyle/content/healthday/634169.html>
<http://health.msn.com/health-topics/sleep-disorders/articlepage.aspx?cp-documentid=100253724>

How memory works (January, 2010)

Martha Stewart Living Magazine

<http://www.wholeliving.com/article/memory>

Memories! Is Sleep Key To What We Remember (and Forget)? Harvard Team Says "Yes"

The Daily Galaxy

http://www.dailygalaxy.com/my_weblog/2009/06/speak-memory-sleep-key-to-what-we-remember-and-what-we-forget.html

Sleep may be important in regulating emotional responses (June, 2009)

Science Daily

<http://www.sciencedaily.com/releases/2009/06/090611071359.htm>

The power of power naps (March, 2008)

Scientific American

<http://www.scientificamerican.com/blog/60-second-science/post.cfm?id=the-power-of-power-naps>

Researchers find that sleep selectively preserves emotional memories (Aug, 2008)

Harvard Science

<http://www.harvardscience.harvard.edu/medicine-health/articles/researchers-find-sleep-selectively-preserves-emotional-memories>

Sleep helps preserve emotional memories (Aug, 2008)

Reuters

www.reuters.com/article/healthNews/idUSCOL76596820080827?feedType=RSS&feedName=healthNews

Can not sleeping erase your memories? (Aug, 2008)

Discover Magazine

<http://blogs.discovermagazine.com/discoblog/2008/08/21/can-not-sleeping-erase-your-memories/>

Sleep selectively preserves emotional memories (Aug, 2008)

Science Daily

<http://www.sciencedaily.com/releases/2008/08/080814091411.htm>

Creative dreams (Oct, 2006).

Nature

http://blogs.nature.com/news/blog/2006/10/sfn_creative_dreams.html

How we learn and remember. Don't lose sleep over it! (Jan, 2007)

Society for Neuroscience News Release.

http://www.sfn.org/index.cfm?pagename=news_101706c

How good sleep enhances memory functions, learning, and creativity. (Jan, 2007)

iHealthBulletin News.

<http://www.ihealthbulletin.com/blog/2007/01/15/how-good-sleep-enhances-memory-functions-learning-and-creativity/>

Sleep on this: Rest may aid memory (June, 2006).

Desert News.

http://findarticles.com/p/articles/mi_qn4188/is_20060624/ai_n16505602

Phantom memories: Stress wrecks your head, and sometimes, the truth (Jan, 2002).

Popular Science.

<http://www.popsci.com/popsci/medicine/a0b8c4522fa84010vgnvcm1000004eebcccdrd.html>

False memories (Nov, 2000).

The New Scientist.

<http://www.newscientist.com/article.ns?id=dn140>

KEY LABORATORY MEMBERS

Postdoctoral Fellow

Sara Alger, Ph.D.

Ph.D. Students (Past)

Alexis Chambers (Assistant Professor at North Central College, as of Aug 2015)

Enma Pardillo-Delgado (Postdoctoral Research Fellow at Harvard University/Massachusetts General Hospital)

Tony Cunningham (Clinical Intern at the Kansas City VA)

Stephen Mattingly (Postdoctoral Research Fellow with the IARPA MOSAIC project at Notre Dame)

Ph.D. Students (Current)

Tony Martinez

Sara Kim

Current Undergraduate Students

Adam Uppendahl

Aly Sonnen

Annalise De Marco

Brett Whalen

Brian Sayles

Cameron Moore

Caroline Hazapis

Gaby Llano

Hannah Kenneally

Jessica Gibson

Jori Waner

Kimberly Trochuck

Makenzie Huguet

Mara Wilson

Mark Chaikovsky

Paula Hastings

Rosemary Pfaff

Sarah Newcome

Erin Brown

Hali Nguyen

Catherine Galletti