

Title: Mining the gap: Neuroscience and emotional memory as tools for imagining the journey from information to meaning

Presenters: Rev. Dr. Jason C. Whitehead and Rev. Dr. Holly Inglis

Main Concepts/Methodology:

“Far from being manipulative or coercive, tapping into emotional memory is a powerful hook for new information. Emotional connection is a form of affective elaboration and helps to establish relevance” (Inglis, 2014, p. 65) .Engaging the neuroscience of imagination means diving into memories, emotions, and beliefs to create "sticky learning" environments. In these spaces experiences are remembered and reflected on in ways that engage a creative process of re-imagining their meaning for a present context. This workshop uses a combination of teaching methods, paying particular attention to expeditionary learning, to engage participants’ imaginations and explore how memories are recalled and recreated in seemingly novel experiences.

Basic Workshop Outline

- I. Introductory Exercise (10 minutes)
 - A. Visual/Auditory Memories and word association
 - B. Brief Exploration/Explanation of the impact of sensory data on learning
- II. Memory, Beliefs, Emotions, and Imagination (15 minutes)
 - A. Brief presentation on the neuroscience of memory, beliefs, emotions, and imagination
 - B. Explanation of emotional memory and affect it has on learning, example of classroom exercise
 - C. Principles and practices of Expeditionary Learning and their relationship to emotional memory and imagination
 - D. Explanation of role of emotional memory in church setting
 - E. Role of emotional memory and reimagination in religious education classroom
- III. Participant Exercise (20 minutes)
 - A. Individual exploration of a meaningful educational experience
 - B. Table Discussion - Reflection on how this memory impacts current teaching methods
 - C. Larger participant reflection on ideas/experiences that can be gleaned from these memories
- IV. Imagining/Reflecting (20 minutes)
 - A. Participants in the workshop will engage in discussion on a particular class they currently teach
 - B. Using one current assignment, they will reimagine this assignment in order to draw upon students’ emotional memories to connect them to the course objectives
- V. Final thoughts/Reflections (10 minutes)

Primary Sources:

Buchanan, T. W., & Adolphs, R. (2004). The neuroanatomy of emotional memory in humans. In

D. Reisberg & P. Hertel (Eds.), *Memory and emotion* (pp. 42-75). Oxford: Oxford University Press.

Expeditionary Learning Outward Bound (2011). "Expeditionary Learning Core Practices." http://elschools.org/sites/default/files/Core%20Practice%20Final_EL_120811.pdf. New York: elschools.org

Inglis, Holly J. (2014). *Sticky learning: How neuroscience supports teaching that's remembered*. Minneapolis: Fortress Press.

Monfils, M. H., Cowansage, K. K., Klann, E., & LeDoux, J. (2009). Extinction-reconsolidation boundaries: Key to persistent attenuation of fear memories. *Science*, 324(5929), 951-955.

Reading, A. (2004). *Hope & despair: How perceptions of the future shape human behavior*. Baltimore: The Johns Hopkins University Press.

Reisberg, D. (2006). Memory for emotional episodes: The strengths and limits of arousal-based accounts. In B. Uttil, N. Ohta & A. L. Siegenthaler (Eds.), *Memory and emotion: Interdisciplinary perspectives* (pp. 15-36). Malden, MA: Blackwell Publishing.

Whitehead, J. (2013). *Redeeming fear: A constructive theology for living into hope*. Minneapolis: Fortress Press.