UPCOMING PROGRAMS

FDC-Smith Women’s Global Leaders Program
August 30 – September 4, 2015
FDC – Nova Lima, Brazil
Combines Smith’s signature all-women learning environment and FDC’s expertise in global executive development.

HKUST-Smith Leadership Program for Women
November 8 - 12, 2015
HKUST – Hong Kong
Combines HKUST’s strengths in science, technology, and business management with Smith’s signature all-women classroom design.
Teaching Leadership in the Workplace: Lessons from Neuroscience and Experiential Education in Higher Education

James Stellar, Provost, University at Albany SUNY
July 15, 2015
Neuroscience

Brain Cells - 100 million of them

The structure is massively parallel in its organization, every cell is talking at once

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Neuroscience

The Brain Regions – circuits of cells

Defined by function, especially with modern brain scanners
Neuroscience

Modern brain scanners to look at Anatomy

Not good

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Focus on brain scanners that look at **Function**, called Functional Magnetic Resonance Imaging (fMRI)

Classical fMRI – accumbens (cocaine area) activation from seeing cute faces of infants

Advanced fMRI – reconstruct what subject is seeing

Taken from Gallant lab, Berkeley

http://www.youtube.com/watch?v=nsjDnYxJ0bo&feature=player_embedded

https://sites.google.com/site/gallantlabucb/publications/nishimoto-et-al-2011
Three basic Levels of Behavioral Function:

“Triune Brain” after Paul McLean

- **Top level** - Cognitive thinking, words
- **Lower level** - Reflexes
  Example of the anencephalic child and the grasp reflex

- **Middle level** - Point of this section is here, where motivation exists, where you make decisions in what David Eagleman calls the “hidden brain”, where instinctive decisions are made - **Key to leadership**
Neuroeconomics: Decision Making and the Brain
Edited by Glimcher, Camera, Fehr, and Poldrack for Academic Press, 2008

Related:
- Paul Zac TED talk on Oxytocin:
  [http://www.ted.com/talks/paul_zak_trust_morality_and_oxytocin.html](http://www.ted.com/talks/paul_zak_trust_morality_and_oxytocin.html)
- Paper on dopamine gene analysis of successful wall street traders in January 2012 in PLoS ONE
Unconscious decision-making:
- Accumbens (desire, pleasure)
- Insular Cortex (risk, negative)

Iowa Gambling Task

Galvanic Skin Response (GSR) measures show that your gut instinct knows before you do.
Reward Prediction Error

- Ventral tegmental area (VTA) projects to Nucleus accumbens (NACC)
- Neurotransmitter is dopamine
- VTA dopamine firing encodes reward expectation – both positive and negative

Leadership

You are unaware you are making all of these brain computations

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Leadership

What can higher education contribute to leadership in the workplace?

➤ Example of Experiential Education

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Experiential Education

Supplement learning in the classroom with:

- Internships (particularly paid, i.e. cooperative education)
- Service-Learning
- Undergraduate research (leads to mentoring)
- Abroad programs (go outside one’s culture comfort zone)
- Entrepreneurship, Field Experiences,
- Etc.

Ex Ed programs must be substantial and accompanied by reflection to surface the instinctive learning
Experiential Education

Big impact on an institutions and individuals:
• Northeastern University story – rapid rise in reputation
• My neuroscience laboratory story – great outcomes
• Experiential Education Planning Institute story - 80 helped institutions in 10 years

We have been slow to see this in higher education. Due to the focus on the curriculum and inability to see the complementarity of Ex Ed?
Group Discussion: Applications to leadership training in the workplace

Starting with:

- Social dynamics in the workplace
- Group evolution
- Lessons from the trolley dilemma and the ultimate game
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