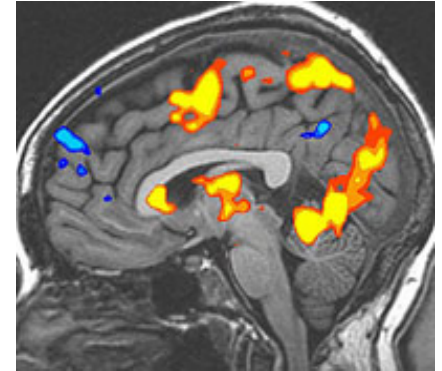
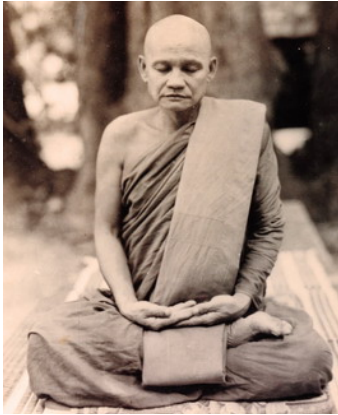




# Meditation and the Brain

Methodological Issues and Applications in Psychology and Neuroscience

COST 0200



Fall 2017

**Lab:** M 2:00 – 2:50pm  
Winnick Chapel, Hillel (80 Brown St.)

**Class:** Monday 3:00 – 5:30pm  
Salomon Center 203

## Course Instructors



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## Course Description

Until recently, meditation took place almost exclusively within the contexts of religious practice, especially monasticism, and was directed towards the attainment of religious goals. Now a multi-million dollar industry, meditation is also being promoted in health, psychology, and medicine for cognitive and emotional benefits associated with happiness, well-being, and human flourishing. This course draws upon the multi-disciplinary expertise of two instructors to provide an exploration and critique of recent psychological and neuroscientific research on meditation. Because the science of meditation is largely derived from Buddhist meditation practices, we also carefully investigate the historical and philosophical contexts of traditional Buddhism in Asia, as well as the assumptions and agendas behind contemporary translations of Buddhist practices for the modern West. Some guiding questions for the course include:

- What can be learned about the brain from the study of meditation?
- In what ways does Buddhist theory and practice inform or influence the science of meditation?
- To what extent can meditation be reduced to a technique, and to what extent do we need to take into account the broader context of meditation?

This course will also feature first-person experiential learning in select meditation practices.

## Course Objectives

By the end of this course, students will:

- understand the basic historical and philosophical contexts of Buddhist meditation practices, including “mindfulness”
- think critically about problems in the cultural translation of mindfulness and meditation from traditional Asian Buddhist contexts to Western biomedical and scientific settings
- be familiar with important scientific theories and findings from the literature on the neuroscience of meditation
- understand to what ends meditation is being applied within clinical psychology and the broader American marketplace
- critically evaluate the findings of scientific and clinical studies of meditation in terms of their methodological rigor, implicit assumptions, and biases

In addition, through a close examination of current scientific research on meditation, students will develop an understanding of and critical perspective on:

- how neurological changes relate to experiential reports
- how meditation affects mental habits, physiology, and behavior in clinical populations and healthy practitioners
- how experimental methods constrain our interpretation of the generalizability of their findings
- how neuroscience both shapes and is shaped by social contexts
- how rhetoric and researcher bias influence scientific writing

## Course Requirements

- ♦ regular, punctual attendance and engaged participation in class and lab **(20%)**
- ♦ written responses to the readings (to be submitted prior to class on Canvas) **(20%)**
- ♦ written reflections on the meditation lab (submitted bi-weekly on Canvas) **(10%)**
- ♦ at least one oral in-class presentation on the day’s readings **(10%)**
- ♦ a 2500 word paper on a topic to be decided upon in consultation with instructors **(40%)**
  - Abstract: 500 words plus at least 5 references due week of 11/6 (10%)
  - Rough Draft: 1500 words plus references due week of 11/20 (10%)
  - Final Draft due during scheduled final exam time (20%)

## Required Texts

- ♦ Sarah Shaw, *Introduction to Buddhist Meditation* (Routledge, 2009, ISBN: 0-415-40900-4)
- ♦ Jeff Wilson, *Mindful America* (Oxford, 2014, ISBN: 978-0-19-982781-7)
- ♦ various articles on Electronic Reserve (password: mindfulness) or the course Canvas site

## Recommended Texts

- ♦ David McMahan, *The Making of Buddhist Modernism* (Oxford, 2008)

## *Schedule of Classes, Labs and Assigned Readings*

### **M 9/11** – Introduction to the Course and to Meditation Past and Present

**read:** Shaw, *Introduction to Buddhist Meditation*, Chs. 1 & 2  
Kabat-Zinn, *Full Catastrophe Living*, Chs. 2, 4, 19 & 20

**lab:** No lab this week. First meeting at 3pm in Salomon Center 203.

### **M 9/18** – The Current State of Meditation Research: What Constitutes Evidence?

**read:** Britton, “Scientific Literacy as a Foundational Competency for Mindfulness Instructors”  
Goyal et al., “Meditation Programs for Psychological Stress and Well-Being: A Systematic Review or Meta-Analysis”  
Strauss et al., “Mindfulness-Based Interventions for People Diagnosed with a Current Episode of an Anxiety or Depressive Disorder”

**lab:** Mindfulness and the Regulation of Attention and Emotion

### **M 9/25** – Mindfulness, Interoception, and Neural Network Mechanisms

**read:** Farb, “Attending to the Present: Mindfulness Meditation Reveals Distinct Modes of Neural Self-Reference”  
Hölzel et al., “How Does Mindfulness Meditation Work? Proposing Mechanisms of Action from a Conceptual and Neural Perspective”

**lab:** Various Approaches to Mindfulness

### **M 10/2** – Key Concepts and Practices of Buddhist Meditation in Context

**read:** Shaw, *Introduction to Buddhist Meditation*, Chs. 3 (skim 49-59) & 4  
Shaw, *Buddhist Meditation: An Anthology of Texts from the Pāli Canon*, Ch. 5  
Analayo, “Mindfulness in the Pali *Nikāyas*”  
Dreyfus, “Is Mindfulness Present-Centered and Non-Judgmental?”

**lab:** Traditional Techniques for Mindfulness and Concentration

### **M 10/9** – No Class (Indigenous People’s Day)

### **M 10/16** – Concentration and the Science of Attention and Perception

**read:** Shaw, *Introduction to Buddhist Meditation*, Ch. 6 (skim)  
Ajahn Chah, *On Meditation*, pp. 17-27  
Gen Lamrimpa, *How to Practice Shamatha Meditation*, pp. 45-49, 59-69  
Lutz, et al. “Attention Regulation and Monitoring in Meditation”  
MacLean, et al., “Intensive Meditation Training Improves Perceptual Discrimination and Sustained Attention”  
Lao et al. “Cognitive Effects of MBSR/MBCT: A Systematic Review of Neuropsychological Outcomes”

**lab:** Methods for Developing Concentration: Working with the Hindrances

**M 10/23 – The Two Arrows: Affective Appraisal and Emotional Proliferation**

**read:** *Sallatha Sutta (Samyutta Nikaya 36.6)*  
Farb, et al., “The Mindful Brain and Emotion Regulation in Mood Disorders”  
Gu et al., “How do MBCT and MBSR Improve Mental Health and Well-Being?”  
Brewer, *The Craving Mind* (selections)

**lab:** Approaches to Mindfulness and Emotion Regulation

**[ T 10/24 – Lecture by Dr. Judson Brewer at 5:30pm ]**

**M 10/30 – Buddhist Modernism: Cross-Cultural Translations and Transmissions**

**read:** Kabat-Zinn, “Some Reflections on the Origins of MBSR, Skillful Means, and the Trouble with Maps”  
McMahan, *The Making of Buddhist Modernism*, Ch. 4: “Modernity and the Discourse of Scientific Buddhism”  
Wilson, *Mindful America*, Chs. 1 & 2

**lab:** Review

**M 11/6 – Meditation and the Marketplace (with Dr. Kristina Eichel)**

**read:** Wilson, *Mindful America*, Chs. 3-5  
additional readings TBD

**lab:** Social and Relational Approaches to Mindfulness

**M 11/13 – Part 1: The Varieties Project; Part 2: Mindfulness and Normative Frameworks**

**read:** Lindahl et al., “The Varieties of Contemplative Experience: A Mixed-Methods Study of Meditation-Related Challenges in Western Buddhists”  
Sharf, “Is Mindfulness Buddhist? (And Why It Matters)”

**lab:** TBD

**M 11/20 – NO CLASS. Professors at American Academy of Religion**

**read:** Get ahead on 11/27 readings. Work on Paper First Draft. Due by the end of class.

**M 11/27 – Part 1: Mindfulness and Normative Frameworks (continued); Part 2: Compassion-Based Practices and Their Neural Correlates**

**read:** Lindahl, “Why Right Mindfulness Might Not be Right for Mindfulness”  
Brown, “Can Secular Mindfulness Be Separated from Religion?”  
Wilson, *Mindful America*, Ch. 6  
Galante et al., “Effect of Kindness-Based Meditation on Health and Well-Being: A Systematic Review and Meta-Analysis”  
Geshe Namgyal Wangchen, *Awakening the Mind of Enlightenment*, Ch. 11

**lab:** Compassion and Loving Kindness Practices

## **M 12/4 – Meditation and the Self**

**read:** U Pandita, *In This Very Life*, 4-13, 15-18

Olendzki, “The Transformative Impact of Non-Self”

Ryan and Rigby, “Did the Buddha have a Self?”

Brewer et al., “Meditation Experience is Associated with Differences in Default Mode Network Activity and Connectivity”

Josipovic et al., “Influence of Meditation on Anti-Correlated Networks in the Brain”

Samuel, “The Contemporary Mindfulness Movement and the Question of Nonself”

**lab:** Approaches to Insight Meditation

## **M 12/11 – Final Discussion and Workshop of Final Papers**

**read:** None. Work on Final Paper.

**lab:** Review / Choose your own adventure

## Course Perspectives and Policies

### On Contemplative Studies and Critical First-Person Methodologies

Contemplative Studies is an emerging interdisciplinary academic discipline that aims to investigate the history, discourses, and methods of cognitive, affective, and ethical self-transformation. This course introduces students to some of the contemplative practices, experiences, and discourses that can be found in historical religious traditions and contemporary psychotherapeutic applications, where they serve as means of transforming the practitioner's physical, cognitive, affective, and ethical faculties—and usually in relation to a specific conception of either salvation or well-being. As a means of understanding these traditions, students in this course will employ third-person (“objective”), second-person (“intersubjective”), and critical first-person (“subjective” or “experiential”) methodologies.

Because this course includes experiential learning through critical first-person and intersubjective second-person perspectives, it is essential to reflect upon the potential difficulties of bringing this data to bear on our understanding of contemplative traditions. *Critically* engaging these practices and traditions from first-person perspectives requires being aware of the unquestioned assumptions, biases, opinions, and motives that could potentially distort our understanding of our own experience. It is also particularly important to reflect upon how and why the appropriation or reconceptualization of contemplative practices and experiences from other cultural contexts can lead to an ungrounded and uncritical romanticism. Because we are seeking to acquire a nuanced understanding of contemplative practices, discourses, and experiences, claims from personal experience carry no *unique* weight or authority in this course, just as members of religious traditions within their own cultural contexts often critically interrogate experience-based claims.

### On Attendance & Participation

This course places a central importance and value on intersubjective second-person approaches to learning. Consequently, attendance in class and participation in class discussions and group activities is *absolutely essential*. In order to be able to participate in these discussions and activities, you must come to class prepared—that is, you are expected to carefully read any assigned materials *and bring those materials with you to class*, and you are expected to carefully and thoroughly complete all assignments on time. If you bring a laptop computer, it is expected that you will use it only for class-related activities such as accessing assigned texts and note-taking.

Each class is divided into two sessions: a lab and a seminar-style class. Because participation factors into your final grade, *each* unexcused absence will have an effect on this portion of your grade. Missing four or more independent class sessions throughout the semester will result in the forfeiture of the entirety of your participation grade. Missing six or more class sessions will result in failure of the course. Please be particularly punctual when arriving to contemplative practice labs!

### Note on Contemplative Practices and Mental Health

By enrolling in this class, you agree to take responsibility for your own physical and mental well being by recognizing the limitations of these contemplative practices and the limits of your own physical, mental, and emotional faculties.

### Final Disclaimers

The *promotion* of particular beliefs or practices is not an objective of this course. Rather, we will *investigate* contemplative traditions through critical first-person methodologies in order to better understand the potential importance, relevance, and value these traditions have had and continue to have for communities of human beings both within and beyond religious contexts. Should you become unable or unwilling to engage in the experiential learning dimension of this course, alternate assignments will be arranged.