

IS THE BODY ENOUGH? COGNITIVE SCIENCE, EMBODIMENT, AND RELIGIOUS EXPERIENCE

Institution: Boston University, Division of Religious and Theological Studies
Instructor: Judith Kovach

How do we know the world, and how do we know God? The nature of knowledge is a central issue in both comparative religion and cognitive science. But how is the knower as cognitive-scientific object, delineated by empirically verifiable data, to be reconciled with the subjectivity of the religiously experienced Self? What light can that knower as object shed upon the meaning of religious practice and experience? And what light can the religious Self shed upon the nature of cognition?

In recent years, a new breed of cognitive scientists have begun exploring the embodied nature of cognition and the reflexivity of awareness. This new focus in cognitive science is directly relevant to the issue of religious practice and resonates strongly with both the central problem of the self in religion and with anthropology's multivocal dialectic of inner and outer. At the same time, a fresh look at the literature in both anthropology and comparative religion reveals a wealth of approaches, especially in recent years, in which religious ritual is treated less as expressive symbolization than as a practical technique of cognitive and phenomenal reorientation. Such approaches open up the possibility of a dialectic between cognitive science and comparative religion that embraces a materialist but nonreductionist approach to the lived body as the locus and source of both secular cognition and religious gnosis.

Science has long held that the physical world is self-sufficient and self-revelatory, that otherworldly or nonphysical explanations for physical phenomena and the laws that govern them are unnecessary. Can we say the same of ourselves? Is the body enough, self-sufficient and self-revelatory, or must we resort to an extracorporeal realm of mind to articulate our own natures and what it means to know? Many have pointed to the refined and multilayered order and harmony of the physical world as not merely self-revelatory but divine revelation. Are we, as embodied beings, not part and parcel of that order and harmony? If mind is embodied, and God immanent, is the human body both self- and Self-revelatory? And if we take to heart the notion that we are created in God's image, what divine gnosis does the human body utter?

This course is designed to explore the mutual relevance of cognitive science and comparative religion by correlating the notion of embodiment as it is delineated in recent studies of cognition with religious views of the body and with comparative and anthropological studies of religion that focus on practice and technique. The goal of the course is twofold and reflective: first, to achieve a more nuanced interpretation of the religious and cognitive significance of the body and, second, to achieve a more sophisticated understanding of both cognitive science and religious experience by examining both through the lens of the lived body.

COURSE REQUIREMENTS AND GRADING

This course will be offered as a seminar, open to both graduate and undergraduate students, that meets for three hours once per week. Enrollment will be limited to 20 students, with preference given to students in relevant fields (theology and religious studies, philosophy, psychology, anthropology, neuroscience, and cognitive science). It will be a demanding course, particularly for undergraduates, and students are encouraged to meet and work together outside of class to clarify the readings, to learn from each other, to generate questions, and to enhance classroom presentations and discussions.

Satisfactory completion of the course entails the following responsibilities:

1. Students will be expected to complete assigned readings by the date specified and with sufficient thought to play an active role in class discussions. There is a class website, and students are required to post brief (between 75 and 150 words) questions and comments on weekly readings no later than 24 hours before each class meeting.

•Class discussion and website comments: 20%

2. Each student will be responsible for introducing and guiding the discussion on a particular assigned reading. Undergraduates will be expected to perform this task only once, graduates will be responsible for two to three presentations, depending on class size. Students should plan to productively occupy approximately 30 minutes of class time for each presentation. A signup sheet for dates and texts will be available on the first day of class.

•Class presentations—25%

3. An 8–10-page critique of one full-length text or four 3–5-page critiques of articles from the suggested reading list must be submitted at any time from the beginning of the seventh week of class to the end of the tenth week of class. The critiques should emerge from a close and careful reading of the material. They will be evaluated on the basis of the student's grasp of the material, the sophistication and depth of engagement with it, the clarity of presentation of both the author's and the student's viewpoint, and the quality of writing. Poor spelling and grammar will adversely affect the final grade. Critiques will be accepted up to two weeks late with a grade penalty: within the first week after the due date, 1/3 of a grade penalty; within the second week, 2/3 of a grade penalty. Critiques will not be accepted after the end of the twelfth week.

•Critique(s)—25%

4. A term paper of 10–12 pages for undergraduates and 12–15 pages for graduate students addressing some aspect of the interface among religion, cognitive science, and the body will be due on the third day of the final exam study period. The topic of the paper must be determined in consultation with the instructor. Papers will be evaluated on the basis of the clarity of presentation, quality of writing, the student's grasp of the relevant issues, and the sophistication and depth of engagement with the course material—that is, I expect students to have understood and wrestled with both the larger

course issues and the particular issues they address in their papers and to present their ideas in a clear and literate fashion. Poor spelling and grammar will adversely affect the final grade. Papers will be accepted up to three calendar days after the due date with a grade penalty of 1/3 of a grade for each day late. Papers will not be accepted after the sixth day of the final exam study period.

•Final Paper—30%

REQUIRED TEXTS

Course Packet

Coakley, Sarah, ed. *Religion and the Body*. Cambridge: Cambridge University Press, 1997.

d'Aquili, Eugene, and Andrew B. Newberg. *The Mystical Mind: Probing the Biology of Religious Experience*. Minneapolis: Fortress Press, 1999.

Johnson, Mark. *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason*. Chicago: The University of Chicago Press, 1987.

Lawson, E. Thomas and Robert N. McCauley. *Rethinking Religion: Connecting Cognition and Culture*. New York: Cambridge University Press, 1990.

Varela, Francisco J., Evan Thompson, and Eleanor Rosch. *The Embodied Mind: Cognitive Science and Human Experience*. Cambridge: The MIT Press, 1993.

OFFICE HOURS: (day and time, room # + bldg)

I will be available outside of class for consultation with students about any and all course matters. I would much prefer to meet during office hours; if that is impossible, please see me to arrange another time. You can reach me by phone (phone #) during office hours or leave messages for me at the Theology office (617-353-3050).

COURSE SCHEDULE

Week 1: Introduction—The Knowing Self

Weeks 2–3: The Religious Body

Weeks 4-5: The Ritual Body

Week 6: Cognitive Science

Weeks 7–9: Cognitive Science and Embodiment

Weeks 10-12: Cognitive Science and Religious Experience

Week 13: Expanding the Conceptual and Methodological Envelopes: A Case Study of Religious Embodiment

Week 14: Closing Discussion of Course Goals

TEXTS ON RESERVE

- Austin, James H. *Zen and the Brain*. Cambridge: The MIT Press, 1998.
- Bell, Catherine. *Ritual Theory, Ritual Practice*. New York: Oxford UP, 1992.
- Bruner, Jerome. *Acts of Meaning*. Cambridge, MA: Harvard UP, 1990.
- Churchland, Paul. *Matter and Consciousness: A Contemporary Introduction to the Philosophy of Mind*. Cambridge: The MIT Press, 1988.
- Coakley, Sarah, ed. *Religion and the Body*. Cambridge: Cambridge University Press, 1997.
- d'Aquili, Eugene, and Andrew B. Newberg. *The Mystical Mind: Probing the Biology of Religious Experience*. Minneapolis: Fortress Press, 1999.
- d'Aquili, E. G., D. D. Laughlin, and J. McManus. *The Spectrum of Ritual*. New York: Columbia UP, 1979.
- Forman, Robert, ed. *The Innate Capacity: Mysticism, Psychology and Philosophy*. New York: Oxford University Press, 1998.
- Haight, John F. *Science and Religion: From Conflict to Conversation*. Paulist Press, 1996.
- Katz, S. T., ed. *Mysticism and Philosophical Analysis*. New York: Oxford University Press, 1978.
- Kovach, Judith. *Adam's Body: Kinetics, Cognition, and Religious Experience in Zen Walking and Sufi Whirling*. Ph.D. Dissertation, Boston University, 2000.
- Lakoff, George, and Mark Johnson. *Metaphors We Live By*. Chicago: University of Chicago Press, 1980.
- Lancaster, Brian. *Mind, Brain and Human Potential: the Quest for an Understanding of Self*. Shaftesbury, Dorset: Element, 1991.
- Laughlin, Charles D. Jr., John McManus, and Eugene G. d'Aquili. *Brain, Symbol & Experience: Toward a Neurophenomenology of Human Consciousness*. New York: Columbia University Press, 1992.
- Lawson, E. Thomas and Robert N. McCauley. *Rethinking Religion: Connecting Cognition and Culture*. New York: Cambridge University Press, 1990.
- Nasr, Seyyed Hossein. *The Need for a Sacred Science*. SUNY Ser. in Religious Studies.

Albany: State University of New York Press, 1993.

Rowlands, Mark. *The Body in Mind: Understanding Cognitive Processes*. *Cambridge Studies in Philosophy*. Cambridge: Cambridge University Press, 1999.

Sansonese, J. Nigro. *The Body of Myth: Mythology, Shamanic Trance, and the Sacred Geography of the Body*. Rochester, VT: Inner Traditions, 1994.

Schipper, Kristofer. *The Taoist Body*. Berkeley: University of California Press, 1993.

Tambiah, Stanley. *Culture, Thought, and Social Action: An Anthropological Perspective*. Cambridge, MA: Harvard University Press, 1985.

Turner, Victor. *The Ritual Process*. Hawthorne, NY: Aldine DeGruyter, 1995.

Von Eckardt, Barbara. *What is Cognitive Science?* Cambridge, MA: The MIT Press, 1996.

Watts, Fraser N. and J. Williams. *The Psychology of Religious Knowing*. London: G. Chapman, 1994.

Yuasa, Yasuo. *The Body: Towards an Eastern Mind-Body Theory*, Chapters 1–7. Trans. Nagatomo Shigenori and Thomas P. Kasulis. SUNY Ser. I–Buddhist Studies. Albany: State University of New York Press, 1987.

WEEK 1 THE KNOWING SELF

- Course description, Review syllabus
- Review central questions
- Start to set up schedule of student presentations
- Discussion of readings

CENTRAL QUESTIONS, GUIDELINES FOR CLASS DISCUSSION

Practice and Doctrine in Science and Religion

- John Haught's four possible models of interaction between science and religion: conflict, contrast, contact, and confirmation
- scientific empiricism and practice vs. religious practice and experience, scientific paradigms vs. religious doctrines and theologies
 - connection between empiricism and practice, primacy of experimental method in science, praxis as integral to scientific epistemology
 - physical phenomena explained and organized by theory; empirico-cognitive nature of scientific knowing; induction, deduction, positivism; unity and scope of scientific paradigm; variety and scope of cognitive-scientific paradigms
 - connection between materiality and revelation, primacy of embodied practice in

religion, praxis as integral to religious belief and doctrine
—religious experience articulated through doctrine; empirico-cognitive nature of religious knowing; experience, belief, doctrine; variety and scope of religious doctrines and theologies

- comparison of focus in science, cognitive science, and religion

Embodiment

- historical scientific attitudes toward the body and their impact on modern research and theories (e.g., the medical corpse vs. the lived body)
- the knowing body as cognitive-scientific object and religious subject: locus of sensation, cognition, and intentionality; locus of religious vision, insight, and divine communion
- the meaning of the lived body and the embodied reflexivity of knowledge: epistemological ground of both science and religion; embodied intersection between scientific and religious knowledge and practice
- introduction to the mind-body problem and the problem of experience

FOCUS QUESTIONS

What is the nature of knowledge? What is the nature of religious experience? What do we mean by experience? What is its relation to the material world? What is the evidentiary value of experience?

How do we know scientifically and religiously? What is the impact of practice, whether scientific or religious, on how and what we know?

What is it that we know? What is revealed through scientific experiment and religious practice? What does science tell us about the world and ourselves? What does religion tell us about the world and ourselves? What does it mean to speak of “otherworldly” experience?

Is scientific insight comparable to religious revelation? Is the wonder of science comparable to spiritual awe? Are mystery and paradox features of both religion and science?

How do scientific and religious attitudes toward the body differ?

What is the religious and scientific meaning and significance of human embodiment?

REQUIRED READING—WEEK 1

Kass, Leon R. “Thinking About the Body.” In *Toward a More Natural Science: Biology and Human Affairs*. New York: The Free Press, 1985, Chapter 11, 276–98.

Haught, John F. *Science and Religion: From Conflict to Conversation*. Paulist Press, 1996: Introduction, Chapters 1, 8, Conclusion

Shapin, Steven, and Christopher Lawrence. "Introduction: The Body of Knowledge." In *Science Incarnate: Historical Embodiments of Natural Knowledge*, 1–19. Chicago: The University of Chicago Press, 1998.

SUGGESTED READING—WEEK 1

Nasr, Seyyed Hossein. *The Need for a Sacred Science*. SUNY Ser. in Religious Studies. Albany: State University of New York Press, 1993.

WEEKS 2–3 THE RELIGIOUS BODY

- Practice in zazen and kinhin, Native American Indian round dances, Sufi whirling
- Complete schedule of student presentations •First Student Presentations
- Discussion of readings

WEEK 2:

- history of comparative religion's treatment of the body
- examples of the body in religion: Hindu tantra, yoga, Taoism, Confucian attitudes toward ritual, Kukai, Dogen, Christian pilgrimage and self-mortification, the Day of Alastu in Islam, Rumi, Iblis, etc.
- primacy of embodied practice in religion, relevance of embodied practice to belief and doctrine, various interpretations and treatments of the body in various religions, religious philosophy as metapraxis
- body memory and religious cultivation

WEEK 3:

- the mind-body problem in Samkhya-yoga, the pramana theorists, Buddhist phenomenism, mindfulness, one-pointedness
- GUEST SPEAKER: Thomas P. Kasulis, Ohio State University

FOCUS QUESTIONS

What is the relationship between religious practice, belief, and doctrine?

Why is the body so important in religion? What is the role of the body in religious practice? What religious knowledge is acquired through embodied practice?

What is meant by embodiment in the various religious contexts? What is the relationship between the body, the mind, and perception? What is meant by religious subjectivity? Does Sufi practice constitute self-worship rather than worship of Allah?

What is meant by the Buddhist notion of emptiness, and what are its implications for the significance of embodied practice?

How does the religious treatment of the mind-body problem differ from the secular treatment of the same problem?

REQUIRED READING—WEEK 2

Kasulis, Thomas P. “Philosophy as Metapraxis.” In *Discourse and Practice*, ed. Frank Reynolds and David Tracy, 169–95. SUNY Ser., *Toward a Comparative Philosophy of Religions*. Albany: State University of New York Press, 1992.

Louth, Andrew. “The body in Western Catholic Christianity.” In *Religion and the Body*, 111–30.

Saso, Michael. “The Taoist body and cosmic prayer.” In *Religion and the Body*, 231–47.

Pye, Michael. “Perceptions of the body in Japanese Religion.” In *Religion and the Body*, 248–61.

Williams, Alan. “Zoroastrianism and the body.” In *Religion and the Body*, 155–166.

REQUIRED READING—WEEK 3

Brown, Joseph Epes. “Modes of Contemplation Through Actions: North American Indians.” In *Traditional Modes of Contemplation and Action*. A Colloquium held at Rothko Chapel, Houston, Texas, ed. Yusuf Ibish and Peter Lamborn Wilson, 233–50. Tehran: Imperial Iranian Academy of Philosophy, 1977.

Collins, Steven. “The body in Theravada Buddhist monasticism.” In *Religion and the Body*, 185–203.

Ware, Kallistos. “‘My helper and my enemy’: the body in Greek Christianity.” In *Religion and the Body*, 90–110.

Williams, Paul. “Some Mahayana Buddhist perspectives on the body.” In *Religion and the Body*, 205–30.

SUGGESTED READING—WEEKS 2–3

Findly, Ellison Banks. “Breath and Breathing.” In *The Encyclopedia of Religion*, ed. Mircea Eliade, 2:302-8. New York: Macmillan, 1987.

Kasulis, Thomas P. “The Body—Japanese Style.” In *Self as Body in Asian Theory and Practice*, ed. Thomas P. Kasulis with Roger T. Ames and Wimal Dissanayake, 299–319. SUNY Ser., *The Body in Culture, History, and Religion*. Albany: State University of New York Press, 1993.

Nasr, Seyyed Hossein. “The Complementarity of the Contemplative and Active Lives in Islam.” In *Traditional Modes of Contemplation and Action*. A Colloquium held at Rothko Chapel, Houston, Texas, ed. Yusuf Ibish and Peter Lamborn Wilson, 419–40. Tehran: Imperial Iranian Academy of Philosophy, 1977.

Sansonese, J. Nigro. *The Body of Myth: Mythology, Shamanic Trance, and the Sacred Geography of the Body*. Rochester, VT: Inner Traditions, 1994.

Schipper, Kristofer. *The Taoist Body*. Berkeley: University of California Press, 1993.

“Dogen.” In *Sources of Japanese Tradition*, Vol. 1, comp. Ryusaku Tsunoda, Wm. Theodore de Bary, and Donald Keene, 240–50. New York: Columbia University Press, 1958.

Yuasa, Yasuo. *The Body: Towards an Eastern Mind-Body Theory*, Chapters 1–7. Trans. Nagatomo Shigenori and Thomas P. Kasulis. SUNY Ser. I–Buddhist Studies. Albany: State University of New York Press, 1987.

Waley, Muhammad Isa. “Contemplative Disciplines in Early Persian Sufism.” In *Classical Persian Sufism: from its Origins to Rumi*, ed. Leonard Lewisohn, 497–581. London: Khaniqahi Nimatullahi, 1993.

WEEKS 4–5 THE RITUAL BODY

- Discussion of readings
- Student Presentations

WEEK 4:

- history of the anthropological treatment of the body; the symbolic/expressive body, the socially constructed body

- liminality and the body: van Gennep, Turner

- map is not territory: Bourdieu

WEEK 5:

- ritual as technique: Malinowski, Durkheim, Bell, Asad

•ritual and cognition: Bloch, Tambiah

FOCUS QUESTIONS

Is ritual primarily social action? Political action? Psychological action? Cultural action? What is the significance of ritual liminality for our understanding of religious embodiment?

How does ritual convey knowledge? What kind of knowledge is it? How is that knowledge related to the movements and dispositions of the body? Is embodied knowledge different from intellectual knowledge, and if so, how?

Does religious awareness arise from bodily practice? Is religious meaning found in the embodied nature of ritual or in the concepts it purportedly expresses? How important are the sensory aspects of ritual?

How can an embodied religious knowledge be articulated? What are the cognitive aspects of ritual? What is the role played by the mind in ritual? Is ritual experience susceptible to analysis?

How is the notion of embodiment different among those theorists who approach ritual as symbolic expressive and those who approach ritual as technique?

REQUIRED READING—WEEK 4

Jackson, Michael. "Knowledge of the Body." *Man* 18 (1983): 327–45.

Needham, Rodney. "Percussion and Transition." *Man* ns 2 (1967): 606–14.

Staal, Frits. "The Meaninglessness of Ritual." *Numen* 26:2-22. 1975.

Turner, Victor. "Betwixt and Between: The Liminal Period in Rites de Passage." In *The Forest of Symbols: Aspects of Ndembu Ritual*, 93–111. Ithaca: Cornell University Press, 1967.

REQUIRED READING—WEEK 5

Asad, Talal. "On Discipline and Humility in Medieval Christian Monasticism." In *Genealogies of Religion*, 125–67. Baltimore: The Johns Hopkins University Press, 1993.

Bloch, Maurice. "Symbols, Song, Dance and Features of Articulation." In *European Journal of Sociology* 15 (1974): 55–81.

Schechner, Richard. "Magnitudes of Performance." In *The Anthropology of Experience*, eds. Victor W. Turner and Edward M. Bruner, 344–369. Urbana, IL: University of

Illinois Press, 1986.

SUGGESTED READING—WEEKS 4–5

Bell, Catherine. *Ritual Theory, Ritual Practice*, Part I. New York: Oxford UP, 1992.

Tambiah, Stanley. *Culture, Thought, and Social Action: An Anthropological Perspective*, Chapters 1, 2, and 4. Cambridge, MA: Harvard University Press, 1985.

Turner, Victor. *The Ritual Process*, Chapters 3–5. Hawthorne, NY: Aldine DeGruyter, 1995.

Zarilli, Phillip B. “‘Doing the Exercise’: The In-body Transmission of Performance Knowledge in a Traditional Martial Art.” *Asian Theatre Journal* 1 (1984): 191–205.

WEEK 6 COGNITIVE SCIENCE

- Discussion of readings •Student Presentations

- the historical rise and theoretical development of the field of cognitive science, significance of historical roots to modern practice and theory

- the disciplines of cognitive science: philosophy, artificial intelligence, psychology, linguistics, anthropology, neuroscience

- classical cognitivism, the computational mind, cognitive patterning, connectionism, functionalism, emergence theories

- conflicts in cognitive science: definitional problems, methodological conflicts, empiricism vs. rationalism, positivism and neurobiological reductionism, the view from nowhere, subjectivity

- the nature of meaning, syntax vs. semantics

- the problem of subjectivity: cognitive scientific emphasis on the individual, scientific verification, prediction

FOCUS QUESTIONS

What is the fundamental task of cognitive science? What is the relationship among epistemology, objectivity, and subjectivity in cognitive science?

What does cognitive science mean by “mind”? “Knowledge”? “Meaning”?

Is awareness fully constituted by rationality and perception?

What is the distinction between meaning and information? Is there a distinction between religious meaning, cultural meaning, and cognitive meaning?

What is the nature of the self articulated by cognitive science? How is the neurologically-based self different from and similar to the cultural self and the religious self?

Does cognitive science seem to be relevant to religion? Why or why not? What is the relevance for religion of the methodological conflict between biologically and culturally-based views of cognition?

REQUIRED READING—WEEK 6

Gardiner, Howard. *The Mind's New Science: A History of the Cognitive Revolution*, Chapters 1–4, 8. N.P.: Basic, 1987.

SUGGESTED READING—WEEK 6

Churchland, Paul. *Matter and Consciousness: A Contemporary Introduction to the Philosophy of Mind*. Cambridge: The MIT Press, 1988.

Von Eckardt, Barbara. *What is Cognitive Science?* Cambridge, MA: The MIT Press, 1996.

WEEKS 7–9 COGNITIVE SCIENCE AND EMBODIMENT

- Discussion of readings
- Student Presentations

WEEK 7:

- review of religious treatments of the mind-body dynamic
- the mind-body problem in cognitive science: dualisms, monisms, compromises; reductionism, the symbolic paradigm, connectionism, enaction theories

WEEK 8:

- the embodiment theorists: Lakoff and Johnson; Varela, Thompson, and Rosch
- notion of embodied reflexivity, cognitive primacy of the body, body as constraint upon mind, the theoretical and methodological significance of a phenomenological analysis of cognition
- cognitive schemata, metaphor theories of cognition, body image vs. body schema, preintentional spatiality, the organism and its environment, the enactive approach to cognition

- the nonpropositional structure of embodied experience; structural meaning vs. phenomenal meaning; dispositional knowledge

WEEK 9:

- GUEST SPEAKER: Anna Foerst, Massachusetts Institute of Technology

FOCUS QUESTIONS

How is the relationship between mind and body treated differently in cognitive science and from a religious perspective? What do the cognitive-scientific treatments of the mind-body problem say about the nature of the self?

How is the embodied view of cognition different from classical cognitivism?

What does cognitive embodiment reveal about the knowing self?

What does the notion of reflexivity reveal about the epistemological grounding of both science and religion?

What are the differences and commonalities between the preintentional bodily schemas of Lakoff and Johnson and the Buddhist phenomenism of Varela?

How does cognitive embodiment address key questions about the nature of meaning, syntax vs. semantics, empiricism vs. rationalism, nature vs. nurture, relativism vs. universalism, the problem of subjectivity, the mind-body problem?

What is the relationship between the nonpropositional structure of embodied experience and the religious self?

What is the relationship between the physicality of experience and the sense of self?

REQUIRED READING—WEEK 7

Barbour, Ian G. *Religion and Science: Historical and Contemporary Issues*. San Francisco: Harper, 1990, 258–63.

Haight, John F. *Science and Religion: From Conflict to Conversation*. Paulist Press, 1996: Chapters 4, 6.

REQUIRED READING—WEEK 8

Johnson, Mark. *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason*. Chicago: The University of Chicago Press, 1987.

REQUIRED READING—WEEK 9

Varela, Francisco J., Evan Thompson, and Eleanor Rosch. *The Embodied Mind: Cognitive Science and Human Experience*. Cambridge: The MIT Press, 1993.

SUGGESTED READING—WEEKS 7–9

Alverson, Hoyt. “Metaphor and Experience: Looking Over the Notion of Image Schema.” In *Beyond Metaphor: The Theory of Tropes in Anthropology*, ed. James W. Fernandez, 94–117. Stanford, CA: Stanford University Press, 1991.

Gallagher, Shaun. “Body Schema and Intentionality.” In *The Body and the Self*, eds., Jose Luis Bermudez, Anthony Marcel, and Naomi Eilan, 225–44. Cambridge, MA: The MIT Press, 1998.

Lakoff, George, and Mark Johnson. *Metaphors We Live By*. Chicago: University of Chicago Press, 1980.

Laughlin, Charles D. Jr., John McManus, and Eugene G. d’Aquili. *Brain, Symbol & Experience: Toward a Neurophenomenology of Human Consciousness*. New York: Columbia University Press, 1992.

Martin, M. G. F. “Body Awareness: A Sense of Ownership.” In *The Body and the Self*, eds., Jose Luis Bermudez, Anthony Marcel, and Naomi Eilan, 267–289. Cambridge, MA: The MIT Press, 1998.

Rowlands, Mark. *The Body in Mind: Understanding Cognitive Processes*. Cambridge Studies in Philosophy. Cambridge: Cambridge University Press, 1999.

Straus, Erwin. “The Upright Posture.” In *Phenomenological Psychology*, 137–165. New York: Basic, 1966.

Zarilli, Phillip B. “‘Doing the Exercise’: The In-body Transmission of Performance Knowledge in a Traditional Martial Art.” *Asian Theatre Journal* 1 (1984): 191–205.

Wagman, Morton. *Cognitive Science and the Mind-Body Problem: From Philosophy to Psychology to Artificial Intelligence to Imaging of the Brain*. Westport, CT: Praeger, 1998.

WEEKS 10–12 COGNITIVE SCIENCE AND RELIGIOUS EXPERIENCE

- Discussion of readings
- Student Presentations

WEEK 10:

- review of the notions of reflexivity, liminality, philosophy as metapraxis, religious cultivation, religious approaches to the mind-body dynamic

- the meditative process, religious intentionality, preconceptual experience
- the notion of disembodied experience
- the problem of pure consciousness vs. constructed experience
- arguments for and against the evidential force of religious experience

WEEK 11:

- cognitive science and anthropology: the biological substrate vs. human culture, emotion and cognition, Bruner's critique of cognitive science and his treatment of the body, syntax vs. semantics, relativism vs. universalism
- review of cultural theories of religion, personal knowledge vs. cultural knowledge, embodied cultural knowledge

WEEK 12:

- GUEST SPEAKER: Andrew Newberg, University of Pennsylvania Medical School

FOCUS QUESTIONS

What do we mean by religious experience? What is known through religious experience? What is the evidentiary value of religious experience? What is its relation to the material world? What is its relationship to religious practice? Is religious insight comparable to scientific insight? Are mystery and paradox features of both religion and science? What is the role played by culture in religious experience? By language? Is religious knowledge cultural knowledge? What are the implications of such a view for the notion of the self?

What is meant by pure consciousness? What is the significance of the notion of pure consciousness for cognitive science? What is the relationship between embodiment and pure consciousness?

What are the differences and commonalities between the preintentional bodily schemas of Lakoff and Johnson and Forman's mystical consciousness? How does Forman's characterization of consciousness compare to the nature of the body?

What is the relationship among religious liminality, preintentional embodiment, and mystical consciousness?

Does the notion of embodiment help us to understand religious experience? Is it meaningful to speak of disembodied experience? Are descriptions of religious experiences phenomenological descriptions?

Does the data of religious experience seem to support one cognitive theory over another? Does it resolve or exacerbate the conflicts and problems in cognitive science?

What is the role played by the mind in religious experience? In what ways can religious experience be said to be cognitive? Does there seem to be a structure or syntax to religious experience? Does religious knowledge seem to be primarily semantic? Do particular image schemata or metaphors seem to emerge from descriptions of religious experience?

What is the relationship between the brain and the self?

What is the significance for religion of the correlation between religious experience and brain states?

How is religious experience articulated differently by cognitive science, religious practitioners, anthropologists, and comparative religionists?

REQUIRED READING—WEEK 10

Forman, Robert. "Introduction." In Robert Forman, ed. *The Innate Capacity: Mysticism, Psychology and Philosophy*, 3–41. New York: Oxford University Press, 1998.

Franklin, R. L. "Postconstructivist Approaches to Mysticism." In Robert Forman, ed. *The Innate Capacity: Mysticism, Psychology and Philosophy*, 231–245. New York: Oxford University Press, 1998.

Jonte-Pace, Diane. "The Swami and the Rorschach." In Robert Forman, ed. *The Innate Capacity: Mysticism, Psychology and Philosophy*, 137–159. New York: Oxford University Press, 1998.

Pflueger, Lloyd W. "Discriminating the Innate Capacity: Salvation Mysticism of Classical Samkhya-Yoga." In Robert Forman, ed. *The Innate Capacity: Mysticism, Psychology and Philosophy*, 45–81. New York: Oxford University Press, 1998.

REQUIRED READING—WEEK 11

Lawson, E. Thomas and Robert N. McCauley. *Rethinking Religion: Connecting Cognition and Culture*. New York: Cambridge University Press, 1990.

REQUIRED READING—WEEK 12

d'Aquili, Eugene, and Andrew B. Newberg. *The Mystical Mind: Probing the Biology of Religious Experience*. Minneapolis: Fortress Press, 1999.

SUGGESTED READING—WEEKS 10–12

Austin, James H. *Zen and the Brain*. Cambridge: The MIT Press, 1998.

Bruner, Jerome. *Acts of Meaning*. Cambridge, MA: Harvard UP, 1990.

d'Aquili, E. G., D. D. Laughlin, and J. McManus. *The Spectrum of Ritual*. New York: Columbia UP, 1979.

Katz, S. T., ed. *Mysticism and Philosophical Analysis*. New York: Oxford University Press, 1978.

Lancaster, Brian. *Mind, Brain and Human Potential: the Quest for an Understanding of Self*. Shaftesbury, Dorset: Element, 1991.

Porush, David. "Finding God in the Three-Pound Universe: The Neuroscience of Transcendence." *Omni* 16(1), 1993.

Ramachandran, V. S., W. S. Hirstein, K. C. Armel, E. Tecoma, and V. Iragui. "The Neural Basis of Religious Experience." 27th Annual Meeting, New Orleans, LA, October 25–30, 1997. *Society for Neuroscience Abstracts* 23, no. 2 (1997): 519.1.

Watts, Fraser N. and J. Williams. *The Psychology of Religious Knowing*. London: G. Chapman, 1994.

WEEK 13 EXPANDING THE CONCEPTUAL AND METHODOLOGICAL ENVELOPES: A CASE STUDY OF RELIGIOUS EMBODIMENT

Discussion of reading:

- modes of knowing: cognition, perception, and proprioception; Hebb's Rule
- the moving body, Labanotation, cognition and the physics of motion, meditative movement analysis
- ritual dissolution
- Adam and Iblis, the body as the image of God

FOCUS QUESTIONS

What does cognitive science tell us about religion?

Does cognitive science help us to understand embodied experience? Does the notion of embodiment provide us with a more comprehensive epistemology?

How does religion change our understanding of cognitive science? How can religious figures, images, practices, paradigms, or doctrines contribute to a more semantically nuanced cognitive science?

What are the interconnections among the body, the mind, ritual practices, and religious experience?

What does the inclusion of proprioception as a cognitive mode of knowing add to our

understanding of religious movement and religious experience?

What other religious images, doctrines, theologies, or beliefs might be understood from the perspective of embodied cognition? In what other ways do religious images, doctrines, theologies, or beliefs influence our understanding of human embodiment and cognition?

REQUIRED READING—WEEK 13

Kovach, Judith. *Adam's Body: Cognition, Kinetics, and Religious Experience*. Ph.D. Dissertation, Boston University, 2001.

WEEK 14 CLOSING DISCUSSION OF COURSE GOALS

- Reexamination of course goals
- Course Evaluations

FOCUS QUESTIONS

What does cognitive science tell us about scientific knowledge? About religious knowledge? About embodiment?

What does embodiment tell us about cognition? About scientific knowledge? About religious knowledge?

What does religion tell us about the body? About cognitive science? About scientific knowledge?

Does the notion of embodiment provide us with a more comprehensive epistemology? What is the relationship of the body to science, to cognitive science, to religion, and to ourselves?

What is the significance of the knowing self for cognitive science? For science? For the notion of embodiment? For religion?

What does cognitive science tell us about the self? What does religion tell us about the Self? What does embodiment tell us about the s/Self?

How does the notion of cognitive embodiment inform the Christian understanding of the mystery of the incarnation? Is the mystery how God incarnated in the person of Jesus Christ or how God incarnates in each of us (myste)?

How does cognitive science inform the Christian understanding of the humanity of Jesus Christ? Does it help us understand the meaning of the claim that Christ is divine? Is the body enough?

How are the goals and subject matter of science different from those of religion? Are scientific and religious knowledge two different aspects of one world, or different ways of interpreting the same world? Are the goals and natures of both fields practical goals? Are both science and religion relevant to fundamental life questions? Equally so?

What is the relationship between the primacy of experimental data in science, embodied practice in religion, and an embodied phenomenology of cognition?

Can an embodied phenomenology of cognition, based on the species universality of the body, resolve the conflict between the universality of scientific paradigms and the multiplicity of religious doctrines and theologies?