

Biology 1140/Sp/11 Biological Aspects of Human Consciousness PRIBOR

SYLLABUS

OVERVIEW OF COURSE

A core idea of this course is that the Enlightenment that occurred between 1500 and 1700 really is the third enlightenment that gave birth to modern science. Many scientists and the public at large do not realize that modern science is a radically new, unique way of studying nature. It also is a spiritual vision that provided the psychic space, so to speak, for the emergence of Jefferson's Declaration of Independence and later the Constitutional, Liberal Democracy that emerged in the victorious united colonies. This scientific enlightenment points backward to the origins of Western culture's individualism that began with the ancient Greek enlightenment evolving to the medieval enlightenment that prepared for the emergence of modern science. This third enlightenment, in turn, morphed into a *postmodern, radical, Ego individualism* integrated with an unregulated, free market ideology that generated greed, meism, and impractical economic decisions. All this came to an abrupt halt when an economic crisis became dramatically manifest in September, 2008. However, this crisis represents "destructive creativity," a core idea of evolution that generates new possibilities leading to a rebirth to a new stable order. Thus, the third enlightenment now points forward to a rebirth to what I call the *fourth enlightenment*.

A major cultural enlightenment is a transformation to a higher level of consciousness that leads to institutions that bring others to this level and constructs a *new conservatism*. This maintains the new set of values and insights while preventing regression to the "old conservatism." The Greek enlightenment produced direct democracy and the rationalism of Socrates, Plato, Aristotle and neo-Platonism, especially Plotinus. The medieval enlightenment combined Greek rationalism with the Greek-Jewish patriarchal ideology. This synthesis collaborated with the mystical vision of the Jesus cult to produce the Catholic Church representing a world religion that formed and then dominated the medieval culture. The scientific enlightenment combined a modified skepticism-constructivism of Plotinus (also related to the constructivism of Ptolemy and Copernicus) with systematic experimentation to produce mechanistic, scientific constructivism. A few decades after Newton this became non-ideological pragmatism that by rejecting participatory subjectivity, it totally focused on empirical problems thereby steering clear of metaphysical, religious, and spiritual-mystical insights. All this occurred in the context of Judeo-Christian culture, an emerging free market capitalism, and the chaos of rebellion against dogmatic religions and monarchies. In the American colonies beginning around 1740, a great openness to diverse philosophical and religious views emerged that led to the formation of our current constitutional, liberal democracy along with an educational system for the upper middle class to maintain it. Initially the ideal of a liberal education dominated mechanistic, scientific thinking. In the 20th century, mechanistic, scientific, free

market capitalism progressively overshadowed liberal education. After 1958 (after Sputnik) non-ideological pragmatism became the key regulatory principle of education. After the countercultural revolution of the late 1960s and early 1970s, the prospect of providing a liberal education became an illusion. However, this illusion remained a dominant force that opposed a rigorous, scientific-technological education. For most colleges liberal education became defined in terms of general education (with distributive requirements) that became a hurdle to overcome and a distraction to most students seeking professional or vocational training.

Unit VIII of the book used in this course provides some major elements of the fourth enlightenment. These insights could provide guidelines for transforming higher education. Chapter 23 describes postmodern scientific constructivism that is centered on non-ideological pragmatism that may be expanded to all empirical problems. Scientific constructivism evolved to narrative, scientific constructivism (as implied by Thomas Kuhn's idea of scientific paradigms). Chapter 24 describes how narrative, scientific knowing may evolve to narrative constructivism that, among other things, provides the language for reforming education. In particular, it leads to student-teacher constructivism that produces creative learning in which the learner constructs a subjective understanding of abstract ideas in terms of his/her personal experiences. While many people believe that science opposes spirituality or mysticism, in fact, the cutting edge of postmodern science (systems science of chaos and self-organization) may be shown to imply, as indicated in chapter 25, that there is an ultimate SOURCE generating all of reality. The SOURCE may be interpreted as creator God (Jewish-Christian-Muslim God) or non-theistically as Te of Taoism, Brahman of Hinduism or Emptiness of Buddhism or Other.

The economic collapse in September 2008 represents one expression of radical, ego individualistic constructivism that intensified the drive toward radical, postmodern democratization. In everyday language people subcoming to this drive do whatever they want to do without any external constraints; for example, de-regulated free market capitalism. As a result, many trends indicate that American society is degenerating toward self-extinction. In the December 3 issue of the Foreign Affairs magazine, Roger Altman, former deputy treasury secretary and Richard Haass, president of the Council of Foreign Relations predict that the federal debt could equal GDP by 2015. They and others offer two scenarios. One, the President and Congress greatly reduce the deficit. Two, U.S. power in the world will greatly decline and permit global capital markets to impose an ugly and punitive solution such as is happening in Spain and England. Also, history teaches us in many instances such as Sparta and Athens in 600 BC that when the middle class is disenfranchised, society is in danger of collapsing. In response to this Sparta created "Spartan democracy" and Athens created direct democracy that enabled the Greeks to defeat the overwhelming power of the Persian invasions. In this course I claim that as has happened many times in the past, out of the crisis of total social collapse, a new order may emerge.

This new order is not simply greater austerity. Rather, it requires a major, profound change in consciousness, which in our current situation is the *Fourth Enlightenment*.

2010 CIVIL WAR IN AMERICA

After the compromise on slavery, politicians representing the united and independent American colonies – after winning the war for independence defined by Jefferson’s Declaration of 1776 -- voted to establish the U.S. Constitution. While this gave birth to the stability of a new nation, it set in motion the progressively increasing polarization between the *status quo Americans* (especially Southern democrats) and *social transformation Americans* (especially northern republicans). The status quo Americans were deeply committed to slavery in opposition to social transformation Americans who were deeply committed to eliminating slavery in order to conform to the spiritual vision of Thomas Jefferson and John Adams that “all men are created equal.” The Civil War between these two groups began in 1861 when several Southern states united in their commitment to the status quo seceded from the Union that, in turn, was committed to eliminating slavery and committed to the emerging industrial, free market capitalism (Adam Smith published *The Wealth of Nations* in 1776).

After the Union won the Civil War in 1865, it became the firmly established United States of America. The reborn U.S. collaborated with Enlightenment science, and by the turn of the century (1900) the U.S. was on its way to becoming a leading free market capitalistic power as well as a military-industrial-political power. This set in motion the progressively increasing polarization between status quo Americans (especially republicans) and the social transformation Americans (especially democrats). The polarization may be described as a status quo deep commitment to American democratic *freedom* defined *exclusively* in terms of scientific, free market capitalistic individualism in total opposition to a social transformation deep commitment to American, democratic freedom defined in terms of incorporating scientific, free market capitalistic individualism into an *ethic of care* that promotes the well-being of all members of society, especially the middle class. This commitment leads to the redistribution of the accumulated wealth of people in the top 10 to 20% economic bracket to the society as a whole, e.g., social security, medical care, and a health plan for all citizens. The 21st century American Civil War began in 2008 with the economic depression, the election of Barack Obama as President, and finally in 2010 with the Congressional passage of the Obama health care package.

The major institution that maintains the current status quo American individualism is the public and private education systems dominated by the elite colleges and universities. The 2010 Civil War will be resolved either with the collapse of U.S. as a major world power or with the transformation of education, especially postsecondary education, that promotes scientific, free market capitalistic individualism. The emergence of “Enlightenment science” along with

industrialization wedded to free market capitalism was the agent of transforming medieval societies and cultures to modern democratic societies and cultures. Likewise the emergence of the fourth Enlightenment could be the agent of transforming modern democratic societies and cultures to postmodern, democratic, socialistic societies and cultures.

FINAL EXAM REQUIRED PAPER due April 30

Write a two and a half to three pages or more typed double spaced on a reasoned commitment to each of two choices. Choice 1: One chooses either be a status quo American or a social transformation American. Choice 2: One chooses to believe that transformation of college education to narrative constructivism as the way to resolve the current Civil War in America either will resolve or will not resolve this conflict. The paper will not be graded but if one does not address either choice, he/she will receive *0 points*. If one addresses either one but not both choices, he/she will receive *8 points*. If one addresses both choices, he/she will receive *15 points*.

OUTLINE OF CONTENT OF COURSE

- I. Universal theory of creativity
 - A. Mystical vision of the third enlightenment, Ch.1, p.1
 - B. Unifying idea of energy has two aspects: Order and Chaos, Ch.1, pp.1-2
 - C. Newton-Einstein mechanistic perspective, Ch.1, pp.1-2
 - D. Energy flux (Chaos) and conservation of energy, Ch.1, pp.1-2
 - E. Entropy and the entropy principle, Ch.1, pp.3-4 and handout #1
 - F. Mechanistic science is like children believing in Santa Clause, Ch.1, pp.4-5
 - G. Theory of machines involving the idea of an energy coupler, Ch.1, pp.5-6
 - H. Seven generalizations about machines and machine creativity, Ch.1, pp.6-13
 - I. Mutuality of Order and Chaos, emergent properties and physical individuation as an Order, Chaos, hierarchal New Order process, Ch.2, pp.14-18
- II. Pre-civilized phase of human evolution
 - A. Animal consciousness equal to feelings, which are conscious emotions, Ch.3, pp.21-22 and pp.28-29
 - B. Triune brain in higher mammals, Ch.3, pp.29-31
 - C. Evolution of animal, subjective consciousness to the patriarchal, nuclear family and to the polar self, Ch.4, pp.29-43 and Ch.5, pp.43-54 and handout #2
- III. Emergence of civilization and the persona self
 - A. Transforming participatory embedded knowing, Ch.6, pp.55-56
 - B. First stages of becoming civilized, Ch.6, pp.56-59
 - C. Emergence of metaphorical, conceptual knowing, Ch.6, pp.60-62

- D. Emergence of *Persona*, two psychic worlds, the great repression, the collective non-conscious versus collective unconscious, transition to persona self as a life-death-rebirth process, and internal conflicts of human individuation, Ch.6, pp.62-64 & Ch.7, pp.65-76
- IV. Evolution to the Persian Empire and to the first stage of the Greek enlightenment.
- A. Formation of the first Persian Empire, Zoroastrianism, Darius' use of Zoroastrianism dualism to produce his vision of holy war, Ch.9, pp.81-85
- B. The first stage of Greek enlightenment, which was that Ionians in the middle east produced the first version of Western individualism, Ch.10, pp.86-105
1. Homer's epic poetry, hero mythology, and the Greek innovation of *City State*
 2. Arete and mythic personal meaning
 3. Sparta democratization of hero mythology
 4. Metaphorical, conceptual humanism including pre-Socratic philosophies
 5. Athenian direct democracy
 6. Athenian, democratic arête
- V. Rational individualism: second stage of the Greek enlightenment
- A. Socratic enlightenment, Ch.11, pp.105-107
- B. Rationalism of Plato and Aristotle, Ch.11, pp.107-108
- C. Three flaws of Greek rationalism, Ch.11, pp.108-109
- VI. Greek-Jewish patriarchal ideology: the first phase of the third stage of the Greek enlightenment, Ch.12, pp.111-123
- A. Hellenization of Greek rationalism as the Great Ending and Great Beginning of *classical Greek enlightenment*
- B. Jewish rational thinking
- C. Dionysian mysteries
- D. Differentiation of Greek rational individualism including the idea of Greek adolescent mentality and the transition to *adolescent adulthood*
- VII. Evolution to Judeo-Christian rationalism: second phase of the third stage of the Greek enlightenment, Ch.13, pp.125-141
- A. Transition from adolescent adulthood to full, adult, control individualism
- B. The *Christ event* interpreted as transcending patriarchal ideology
- C. St. Paul's enlightenment: Greek dualistic view versus Jewish holistic view of humans plus idea of original sin
- D. General features of *mystical, heroic creativity*
- E. Manichaeism
- F. St. Augustine's thought
1. Great Ending of Hellenistic rationalism

2. Great Beginning of Hellenistic Christian rational individualism
- VIII. Preparation for the medieval enlightenment, Ch.14, pp.145-160
- A. St. Augustine's thought
 1. Great Ending of Hellenistic, Christian rationalism
 2. *Christian voluntarism*
 3. Patriarchal way to salvation
 - B. Dark night of Western civilization's *soul* and the disappearance of *interiority* from 200 to about 1050 AD
 - C. Sufism in terms of 28 contrasts between participatory subjectivity and control objectivity
 - D. Pribor-Jung-Sufi understanding of *Romantic Love*
 - E. Medieval awakening around 1050 AD analogous to Avant garde modernism in southern France in about 1885.
- IX. Core ideas of the medieval enlightenment, Ch.15, pp.160-171
- A. Ideas rejected and accepted
 1. Ideas rejected
 - a. Introverted reflection
 - b. Greek idea of concrete experience and human subjectivity as illusion
 - c. Only a few mystics can experience divine illumination
 - d. God remained separated from all that was created
 - e. God manifests reality as a cyclical process or as a linear, evolutionary process
 - f. A human life story understood as a developmental, evolutionary process
 - g. Human individuation emphasizing free choices that determine one's life story
 - h. Metaphorical understanding of the Christ event as one going through many life, death, rebirth processes in moving toward salvation
 2. Ideas accepted
 - a. Extraverted, intellectual reflection leading to new a understanding of nature
 - b. Divine illumination reduced to the experience of the *analogy of being* that leads to a new understanding of nature
 - c. God continually creates the world and thus is imminent in nature even as IT transcends nature
 - d. God manifests Order represented as eternal natures whose interactions define natural law

- e. Each human has a nature that determines behavior
 - f. *Human individualism* is best expressed by one submitting to the dictates of the Catholic Church and passively receiving Grace by participating in Church ceremonies and sacraments
 - g. Death of Jesus and his resurrection as Jesus, the Christ, is understood as the source of Grace that is automatically given to those who submit to the Church (the mystical body of Christ)
- B. Core ideas of the rationalistic school of Muslim theologians (Mu'tazims in opposition to the orthodoxy of Sunni Muslims)
 - C. Rejected Spanish, Sufi illuminism (the "secret doctrine") that may be interpreted as Pribor's idea of student-teacher constructivism
 - D. Continuum of *intelligibility* rather than the continuum of consciousness
 - E. Core idea of Thomistic philosophy-theology; But at the end of St. Thomas' life he had the insight of non-duality of God rather than the Creator God versus creatures
- X. Patriarchal ideology became scientific constructivism, Ch.16, pp.173-188
 - A. Renaissance humanism that provided the base for the emergence of modern science
 - B. Intellectual diversity problem
 - C. Measurement as metaphorical, conceptual thinking
 - D. Modern science characterized by systematic experimentation and the scientific method
- XI. Will to modern science becoming Manichaeic modernism, Ch.17, pp.189-194
 - A. Newton's metaphorical, mathematical theory of gravity exemplifies scientific constructivism
 - B. Scientific positivism
 - C. Manichaeic modernism: logical positivism leading to radical, utilitarian individualism versus spiritual-Manichaeic vision exemplified by Albert Einstein
- XII. Ideology of scientific, objective knowing, Ch.18, pp.194-202
 - A. Ideology of objective knowing
 - B. Scientific, radical skepticism
 - C. Monod's ethic of objective knowledge (seven characteristics)
 - D. Consequences of rejecting participatory subjectivity
- XIII. Consequences of the 1960s countercultural revolution, Ch.22, pp.215-227
 - A. The transcendental perspective relative to: romantic love, the wall between the U.S. government and religion and liberal education versus nominalism
 - B. Social-cultural nihilism in relation to the conflict between individualism and social cohesion
 - C. Summary of the sequence of four enlightenments in western culture

- XIV. Modern science is an evolutionary process, Ch.23, pp.249-261
- A. First differentiation of a scientific paradigm
 - B. First emergence of normal science, which was Newtonian mechanics
 - C. Free market capitalism as a metaphor for biological evolution
 - D. Negative features implied by free market capitalism being analogous to biological evolution
 - E. Three defining features of any evolutionary process and the metaphorical, conceptual representation of them
 - F. First feature of the evolution of science in relation to
 1. Success of any newly emerged paradigm depends on its integration into a stabilized new ecology
 2. Ecological, economic, cultural success of Newton's paradigm in the West versus its failure in Muslim cultures
 - G. Second feature of the evolution of science in relation to
 1. The core unifying paradigm of normal science is non-ideological pragmatism
 2. Scientific experiential (not experimental) *faith* that generates *belief*
 3. Postmodern co-existence of diverse, sometimes contradictory scientific paradigms; thus: integral-aperspectivism of science versus absolutized diversity of mere aperspectivism of the humanities
 - H. Third feature of the evolution of science in terms of
 1. Science always is associated with ethical choices and ideologies
 2. Materialistic, circular, reinforced pragmatism that launched an attack on all ideologies and progressively overtook American college education in relation to
 - a. The conflict between positivistic science and traditional values is *conceptually irrelevant to most practicing scientists and science teachers*
 - b. Materialistic pragmatism is the current postmodern democratization and is the basis of
 - 1) Eros-chaos overwhelming Eros-order
 - 2) America's crisis involving *radical, ego constructivism (radical, ego individualism)*
- XV. Evolution to *narrative constructivism*, Ch.24, pp.262-277
- A. Hierarchical, scientific constructivism
 - B. Break from total control objectivity in terms of the contrast between the first and second law of thermodynamics
 - C. Theory of machines can generate *narrative, scientific constructivism*

- D. Ideas and definitions related to dynamic, systems perspective including machine versus non-machine creativity
 - E. Uroboric puzzles representing systems self-organization
 - F. Systems science solution to the paradox of self-organization
 - G. Subtle reductionism of systems science
 - H. Pseudo-integration of knowledge of systems science
 - I. Metaphorical aspects of scientific paradigms
 - J. Non-logical creativity of scientific problem solving
 - K. Implications of Kuhn's insight of science as a narrative
 - L. Narrative, scientific constructivism could transcend communal fragmentation without diminishing the effectiveness of specialization
 - M. Narrative, science education
 - N. Democratization of intellectual communities by narrative constructivism in terms of
 1. Student-teacher constructivism producing creative learning
 2. The emerging fourth enlightenment
- XVI. Systems theory of individuation implies an ultimate SOURCE, Ch.25, pp.278-285
- A. Narrative understanding of machines leads to an ambiguous, empathetic, participatory understanding of nature
 - B. Circular paradox of systems self-organization
 - C. Mathematical description of evolutionary self-organization in terms of probability interpretation of thermodynamics
 - D. Principia Cybernetic Project in relation to
 1. Meta-System Transition Theory (MSTT)
 2. Eros-chaos, Eros-order collaboration to produce self-organization called evolution
 3. In the MSTT *there is no need for a Creator God hypothesis*
 4. Authors of MSTT claim to answer all the eternal philosophical questions and therefore there is no need for religion
 5. MSTT leaves unanswered why there is any kind of collaboration
 - E. The contradiction of randomness being the "cause" of evolutionary creativity
 - F. Transcendental agnosticism in relation to
 1. Agnosticism: simply refuse to explain intrinsic collaboration in nature
 2. Choose transcendental agnosticism
 - a. Acknowledge there is SOURCE
 - b. SOURCE is not being or non-being and is unknown and unknowable

- c. Transcendental, subjective, narrative constructivism leads one to choose to *believe* in SOURCE
- d. Belief in SOURCE can lead to human creativity and individuation