**SYLLABUS – Biology 1140-Sp-2012**

**BIOLOGICAL ASPECTS OF HUMAN CONSCIOUSNESS**

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**Class Meetings**: T. R. 11:00 – 12:15…………BO 1045

 T. R. 5:30 – 6:45 …………...FH 2200

**Textbook**: **EVOLUTION TO THE FOURTH ENLIGHTENMENT**, 1st ed, 2009, by Donald B. Pribor. Kendall/Hunt Pub. Co. Can be purchased at The Student Bookstore, 3059 W. Bancroft St. phone: 536-9154 and the main UT Bookstore, phone: 530-2516.

# Exam Schedule

The grade for this course will be determined by: three multiple choice exams each consisting of 100 or more questions and a Paper that will replace the final exam.. The schedule for these exams are listed below.

1. First exam worth 3 to 45 pts. 30% of final grade………………………………[TR] 2/9
2. Second exam worth 3 to 45 pts. 30% of final grade……………………………[T] 3/20
3. Third exam worth 3 to 45 pts. 30% of final grade……………………………..[T] 4/24
4. Final Exam Paper worth 15 pts. 10% of final grade: due on or before **Sunday, April 29.** If I am not there**,** put it in the box outside my office door. **I will not accept papers sent by email. I will accept a hard copy in my office, April 30 – May 2, but I will deduct 5 pts for it being late.**

The paper will not be graded. So long as one follows the guidelines and writes on the assigned topic, he/she will receive 15 pts.

Paper replacing Final Exam: In a two to three page typed paper, double spaced, give reasons why you agree or disagree with the thesis described at the end of this syllabus. The thesis is:

**COLLEGE EDUCATION IS DESTROYING DEMOCRACY**

**Missed Exams**.

 If one has a legitimate excuse for missing an exam, he/she can take a makeup exam. The makeup exam must be taken within a week after the missed exam was given. This will be strictly enforced. A student who has not taken the makeup exam after two weeks will receive a zero for that exam.

**Study Guidelines**

Each multiple choice exam will test for material in review sheets I will pass out in each of the three sections of the course. With the possibility of a few exceptions, the topics covered by the multiple choice questions are in the textbook for this course or in the handouts. The “lecture-dialogues” for this course are designed to facilitate students creating for themselves an understanding of the review topics for each exam. Thus, these lecture-dialogues will not give information that students are expected to copy and memorize for the exam. At the beginning of each section, a set of questions taken from the exam for that section will be passed out. Students are encouraged to relate sections in the textbook, handouts, and/or from the lectures to the student selected answer to each of these sample questions. This Syllabus as well as the KEY to each of the lists of sample questions will posted on the internet blackboard.

**EVOLUTIONARY THEME OF THIS COURSE**

 The major theme of this course is that the network of diverse organisms in the biosphere expresses evolutionary, hierarchal levels of organization. For example, any living system in the world represents a life – nonlife hierarchy. Any living system includes nonlife systems, but no nonlife system includes a living system. Thus, life implies nonlife, but nonlife does not imply life. The biosphere is a “hierarchal system” in which the higher level of life organization includes the lower level nonlife organization. The dynamic, evolutionary aspect of this hierarchy means that a lower level nonlife organization “somehow” participated in the emergence of the higher level life organization. This is counter-intuitive! Each human’s experiences indicate that an organism can die and thus become nonlife, but no human ever has experienced a nonlife system becoming alive.

 The levels of nonlife and life organization are categories represented by concepts that cannot be reduced to logical ideas. They cannot be understood to be like mathematical concepts such as squares or spheres that only “exist” in some human’s mathematical imagination. In one’s mind all squares are identical in form and all spheres are identical in form. But no two nonlife patterns of organization concretely existing in one’s world of experience are absolutely identical. Likewise no two life patterns are identical. However, some organization patterns – whether living or nonliving – may be seen to have some degree of similarity and thus can be understood as metaphorical concepts, that is, as distinct categories that are metaphorically similar. Then, we can construct narratives about interactions among nonliving and living things. These narratives are ambiguous and therefore not utilitarian in everyday life. The “scientific revolution” of the seventeenth century (after 1687, the publication of Newton’s Principia) discovered a way to construct narratives that could be reduced to logical, conceptual models that then could be empirically validated. In the 19th century, scientists (guided by Darwin) could propose evolutionary narratives, which produced logical, conceptual generalizations that could be empirically validated. In the 20th and now in the 21st century we still cannot understand how life can emerge from nonlife, but we know that this is a valid story about what happened in the biosphere. More generally we can validate instances that sometimes that when Order goes to Chaos, New Order emerges that includes the modified old Order. This evolutionary generalization is the unifying perspective of this course.

 This course also assumes that mammals and birds express “animal consciousness,” but only humans come to have “self-consciousness.” Non-human primates evolved to primates expressing primitive, human “self” consciousness called, *group ego*. Over time, mind emerged – analogous to life emerging from nonlife – so that each human became the duality of a mind self dominating an ego self. What distinguishes modern humans from all other conscious animals is that each human can evolve (individuate) to hierarchal levels of self consciousness. This psycho-social evolution of self-awareness plays out in the history of human societies after the emergence of civilization.

**PSYCHO-SOCIAL EVOLUTIONARY CYCLES IN AMERICA**

 In their book (2011) Millennial Momentum, Morley Winograd and Michael D. Hais describe psycho-social evolutionary cycles in American history as cultural and political transformations. Since the War of Independence from England, American society has moved through three cycles where “… each cycle has consisted of four types of generations that appear in the same order within that cycle.” (Morley Winograd and Michael D. Hais. 2011. Mellennial Momentum. New Brunswick, Rutgers Uni. Press., p.18) According to these authors, each cycle begins with what they call a “fourth turning,” which consists of four events: catalyst, regeneracy, climax, and resolution. “*Catalyst* [is] a starting event, or sequence of events that produces a sudden shift in mood … [of the country, for example], the 1929 stock market crash …. *Regeneracy* [is] a reenergizing of civil life… [that presents] a set of values for the community to live by…. *Climax* [is that] crucial events occur that confirm the death of the old social, economic, and political order, and the birth of a new one…. [and finally] *Resolution* [is] a triumphant conclusion … [that] finally resolves big public questions and clearly establishes a new order.” (Winograd, et al. 2011, pp. 16-18)

 “Each … [of the four types of generations making up each cycle] has distinctive attitudinal and behavioral characteristics, regardless of when it appears in American history…. [1] Idealist … develop the strongly held values or ideology that guide their behavior throughout their lives. As adults, … [they] are driven by those uncompromising values, even though half of the generation tends to hold to one set of values and the other half believes exactly the opposite…. *Idealists* have very little confidence in the ability and willingness of societal institutions to implement their deeply held beliefs and, as a result, frequently attempt to weaken or even destroy those institutions…. [for example] Baby Boomers (born 1946 – 1964) are the *Idealist generation* of the current generational cycle…. [2] Reactive … [generations] are frequently criticized and condemned by adults. As grownups, they tend to be individualistic, alienated, risk-taking, entrepreneurial, and pragmatic. Gereration X (born 1965 -1982) is the *Reactive generation* in the current cycle…. [3] Civic … [generations] … emphasize adherence to group and social norms. As adults they focus on resolving societal challenges and building institutions …. Tom Brokaw’s book, The Greatest Generation, celebrates the GI generation (born 1901 – 1924), the highly revered civic generation of the previous cycle. The Millennial Generation is the *civic generation* of the current cycle [that began in 2008] …. [4] Adaptive … generations … [produce] adults who tend toward conformity, risk aversion, and compromise…. [for example] … the Silent generation (born 1925 – 1945), [is] the Adaptive generation of the [cycle that preceded the current one beginning with the Millennials (born 1982 – 2003)]” (Winograd, et al. 2011, pp.12-14.)

 A metaphorical, conceptual, narrative understanding of the second law of thermodynamics – hereafter called “the second law” – is the foundation for all applications of the theory of evolution, which this course will describe. I use this philosophical, scientific perspective to interpret and reorganize the central thesis of the book, Millennial Momentum. One way to understand “the second law” is that, what I call *Eros-chaos* “drives” the Order of any system in nature to some degree of Chaos. As a result, *Eros-chaos* destroys some structures. This “creative destruction” leads to new possible interactions that in an “appropriate” environment will lead to a new Order. *Eros-order* drives the Old Order plus some of the newly exposed potential interactions to “create” a New Order that includes a modified old order. This is how the creative process produces a hierarchy of orders. Each of the three cycles in American history begins with a Civic generation followed by the Adaptive generation that incorporates civic values, some of which oppose one another. Thus, the Civic-Adaptive generational sequence produces a relatively stable society even though citizens are committed to one of two or more opposing value systems: for example, Christian values versus positivistic science’s rejection of Christianity. The Idealist-Reactive generation sequence progressively increases the internal polarization of society until a “fourth turning” occurs. This event (or events) triggers the challenge that either society fundamentally transforms or will begin to decline. The current fourth turning was the September, 2008 financial collapse and later the election of Barack Obama as president. The task of the Millennials, the Civic generation starting a new cycle, is to bring about the required transformation of society.

**EVOLUTION TO BABY BOOMER CHAOS**

 The GI Civic-Silent, Adaptive generations produced a stable, patriarchal, hierarchally structured society with strongly held traditional values. The success of the US in World War II represented traditional democratic ideals as expressed in traditional liberal education collaborating with positivistic, mechanistic science joined with capitalistic industrialization. Post-war American society moved into the “resolution phase” of its fourth turning. The Silent Adaptive generation inherited this success and began to expand and enjoy the materialistic benefits from the economic boom that followed the War. However, this very masculine and anti-feminine culture expressed the same patriarchal idealism that generated an avant garde movement that began in France in the late 1800s. Nietzsche was its major philosopher. In the 1950s the elite colleges and universities celebrated in their curriculums this American, more materialistic version of social masculinity. The movie, “The Graduate,” captures the mood in the 1950s of the upper middle class of US society. As European avant garde modernism was drawn to the capitalistic wealth of America, teachers at the secular centers of higher learning digested and taught the perspectives of avant garde modernism. What some of these affluent and materialistically spoiled students at these learning centers “saw” was the intrinsic contradictions of post-World War II society, which they viewed as hypocrisy. The revered idealism of the collaboration of liberal education and capitalistic science contradicted the perceived spiritual vision of the founding fathers of American democracy. This “seeing” helped to spark the Civil Rights movement begun in the 1950s. It was enhanced by the avant garde insights taught at the secular, elite colleges and universities and was further validated by all the lieing and bloodshed associated with the Viet Nam war. Around 1965 upper middle class and wealthy Baby Boomer students became self-righteously outraged and forthwith began the countercultural revolution.

 Anti-patriarchal idealism of these youths provides another way of thinking about the emergence of this revolution. Whenever any society becomes very one-sided, if it doesn’t self-destruct (like the ancient Roman Empire), it swings back toward the repressed side. For example, the very masculine Catholic Church swung back toward femininity via teachings about the Virgin Mary. In 19th century Europe the very masculine, capitalistic, scientific culture generated avant garde modernism’s swing toward feminine subjectivity. In the 1960s a similar break with the objective, hierarchal, patriarchal structure of American society led a minority of Baby Boomer, idealist students at the elite colleges and universities to generate the countercultural revolution. The Eros-chaos of this revolution represents the repressed subjectivity of the feminine archetype reasserting itself. Especially after the 1968 presidential Democratic convention in Chicago, the excesses of this revolt led most Baby Boomers and society in general *to seek* to return to the traditional values of the silent generation. However, this “return” no longer was possible because Western consciousness had transformed to what intellectuals beginning in the 1980s began calling postmodernism. Already this radical shift in the 1960s and 1970s produced: Civil Rights laws, the feminist movement, the gay rights movement, and the reduction of the “ideal of liberal education” to a general education ideal with no central, unifying theme. The new “liberal-general education” model became subservient to capitalistic, utilitarian education.

 As the countercultural revolution ended in the early 1970s, many people returned to or continued to embrace an exclusively capitalistic individualism usually associated with a dogmatic or at least a fundamentalist, Christian religion. A person’s self-identity depended on fitting into some community of shared, traditional values and giving at least nominal commitment to the values of one’s workplace and of society as a whole. Initially the commitment to traditional values and to some fundamentalist religion limited the materialistic selfishness implicit in the democratic capitalism of the “founding fathers” ever since 1790. But the framers of the US Constitution also realized that any dogmatic or fundamentalist religion that determines the political structure of a society is totally incompatible with the core spiritual vision of democracy. Accordingly, the Constitution provides the basis for many dogmatic religions that contradict one another to exist side-by-side. They may generate some hatred and prejudice, but no one religion will dominate any other. So long as “we the people” recognize dogmatism in any form, we can use the Constitution to prevent dogmatism from undermining our freedom.

**POSTMODERN SURGE**

 A postmodern perspective stemming from the countercultural movement sought to destroy – the postmodern term for this is *deconstruct* – the “objectivist myth,” which is: humans can discover Order in nature and then represent this Order by objectively, true knowledge. Postmodernist in the 1980s put forth three interrelated radical ideas: constructivism, which will be discussed extensively in this course, contextualism, and integral aperspectivism. *Constructivism* is the vision that reality is unknowable, but it can stimulate some humans to *construct* an interpretation of one’s perception of reality. *Contextualism* proclaims that there are no autonomous things or autonomous processes; there only are “things-processes.” That is, no “thing” can be understood independent of its interactions with other things, which is its process aspect, and no process can be understood independent of the “things” that participate in interactions that help define the process. Correspondingly, there are no autonomous ideas or autonomous perspectives. Meaning represented by conceptual statements of ideas is not fixed and autonomous; it always is relative to context. This being the case, *there is no single, privileged perspective that underlies all others*. One’s interpretations of the meaning of reality depends on the *context* of one’s perception of reality. *Integral-aperspectivism* is the vision that any particular perspective is likely to be partial, limited, and perhaps distorted. Therefore, the only way to arrive at a more valid, inclusive understanding of reality is that one considers several different perspectives and multiple contexts of each of these perspectives. This “more valid approach” is an *integral view* that integrates diverse interpretations of reality into a holistic vision.

 The core ideas of the postmodern perspective represent a higher level vision of reality that leads to positive social consequences, such as “constitutional democracies” that do not privilege any religion or philosophical perspective. Rather constitutional democracies guarantee one’s freedom to choose to believe and practice whatever his/her conscience dictates so long as this does not undermine the democratic common good. The “bad news” of postmodernism is two-fold. One, because of the indefinite number of meanings and interconnections among them, when any particular meaning is specified to be true or valid by means of truth or validity criteria, that specified meaning is merely another meaning in the indefinite collection of meanings. In other words, any set of truth criteria or validity criteria is *absolutely relative*, which means that no set of criteria can be said to be more true or more valid than any other set. Second, all these relative meanings only are *surface meanings*, because none of them is connected to “ultimate Reality,” which generates ultimate meaning. When this two-fold nihilistic insight is applied to humans, it implies that any developmental, evolution, that is, any human individuation, is an illusion. One may think that he/she is individuating to or has individuated to a higher level of consciousness or a higher level of maturity, but this is an illusion. The specified higher level is just another meaning among an indefinite number of meanings. Furthermore, postmodernism absolutizes diversity by claiming there is no ultimate Reality (Nietzsche’s idea that “God is dead”) and so there cannot be a unity among infinite diversity.

 *Postmodern individualism* that emerged from the countercultural revolution laid bare that there are two “new religions” that dominate along with other fundamentalist religions the American culture in the 20th and 21st centuries: positivistic humanism represented as *capitalistic scientific, constructivism* and democratization represented as *subjective constructivism*. Scientific constructivism is the resultant of the postmodern modification of industrial, utilitarian individualism that emerged before the 1960s revolution.

 *Positivistic humanism* first emerged when Newton proclaimed that positivistic science is the only legitimate type of knowing. According to this view, “true” theories represent empirical patterns and subsequently are tested for validity by the scientific method. Postmodernism introduced the realization that events in nature are not simply given as facts that humans observe but are partly constructed by humans’ perceptions of them. Thus, scientists do not discover “truths about nature” but rather discover empirical, consensually agreed upon patterns in nature and then *construct* theories to represent these patterns. The theories never are objectively true, but they can be empirically validated though they remain open to modification or even rejection at some later date. Thus, postmodernism converted this positivistic humanism into scientific constructivism. Many scientists and science educators take this constructivism perspective to two extreme views. One, while proclaiming that no one can have true knowledge of nature, they proclaim that scientific constructivism is the only legitimate way of creating valid ways of understanding. This “ethic of objective knowing” forbids all other ways of knowing. This, of course, undermines all religions, philosophies, theories of morality, aesthetics, and so on. Two, they proclaim that *participatory subjectivity* only is considered worthwhile when it leads to a validated, scientific theory. Once one has the validated theory, he/she should ignore subjective insights or pay any attention to them only in order to use them for applying the theory to solving concrete problems. This approach leads to utilitarianism.

 Industrial, utilitarian individualism. Between the Civil War and World War I, as the United States became industrialized, many Americans became radical, utilitarian individualists. The social basis for this phenomenon was bureaucratic, consumer capitalism, and its spiritual center was the autonomous individual who was hostile to any traditional moral order that would limit a person’s autonomy. People began to choose work commitments and modify social roles based on the criterion of life-effectiveness as the individual judges it. A calculating managerial style replaced the ethic of care. Examples of utilitarian individualism are persons totally focused on careerism, entrepreneurs, and the professional manager. A middle class mentality emphasizing rationality and technical rules demanded technical, specialized education, bureaucratic occupational hierarchies, and a market economy. To succeed, a person must develop the virtues of discipline, hard work, careful calculation, self-reliance, autonomy, and rational self-improvement. The “good life” defined in this way allows little room for love, feelings, and appreciation of aesthetics and transcendental meaning. Postmodernism converted this radical individualism into *capitalistic, scientific constructivism individualism*.

 Democratization represented as subjective constructivism individualism. The development to this type of individualism was a reaction against the negative aspects of industrial, utilitarian individualism. This movement began by incorporating the three major themes of the 1960s revolution. Theme one is the intense opposition to the private/public split. Accordingly, the individual should be at home in all sectors of his/her social experiences. This means that he/she should be able to develop and express his/her individual self not only at home or with intimate friends but also while participating in bureaucracies and in the workplace. Theme two is nihilism expressed as opposition to many aspects of patriarchal, hierarchal structures including functional rationality, rational dominance of one’s personal feelings and subjective insights, traditional repression of sexuality, thinking of women merely as sex objects, and mindless exploitation of nature. It also opposes calculated life planning and delayed gratifications. It supports organizations and bureaucracies that support community life and the idea of personal transformations. Theme three is the reaffirmation of participatory consciousness that spilled over into the feminist movement, the ecology movement, and the resurgence of occultism, magic, and mystical religions. It also is a disposition to greater receptivity-openness, letting go, and in appropriate situations a passive stance toward the world. One accepts that “a situation or thing is what it is,” which is a core idea of Buddhism. These three themes coalesced into “counterculture expressive individualism.”

 Differentiation of expressive individualism. The next stage of this movement was the *ethic of self-fulfillment*. This ethic entails the search for the full, rich life that is ripe with leisure, new experiences, and enjoyment as a substitute for orderly, work-centered ways of earlier decades. This cultural shift – the hippie revolution – in the late 1960s did not touch the lives of the majority of American. But by the late 1970s, Yankelovich’s surveys (New Rules, Searching for Self-fulfilllment in a World Turned Upside Down, New York: Random House, 1981) showed that 72 % of Americans were beginning to be preoccupied with satisfying the inner needs of the self. Three major theses of the self-fulfillment ethic are the sacred/expressive aspects of life, social deconstructivism, and participatory, subjective individualism.

 *The sacred/expressive aspects of life*. “Sacred” here is used as a sociological concept not opposite to secular or profane but rather opposite to functional rationality, that is, instrumentalism. “Expressive” also is opposed to functional rationality. People and activities have value in their own right, that is, things such as myths, art, poetry, story telling, song, dance customs, architecture, ritual and the harmonies of nature are intrinsically worthwhile. These activities stem from the self-fulfillment search for personal meaning that comes from looking inward to soul expressing the “feeling self.” As a result, people began to appreciate and acknowledge non-instrumental aspects of living that leads one to see himself/herself as a Thou rather than as an It, which is a mere function in some community. People began to experiment with forming their own compact communities that celebrated shared community values, expressiveness, care for others, and renewed orientation toward people and nature as sacred. According to Yankelovich (New Rules…, 1981) in the 1970s 72% of Americans to some degree embraced introspection and self-actualization expressed by two questions: One, how can I break from the responsibilities that family and community impose on me so I can more fully express my personal freedom. Two, how should I express my personal freedom once I enhance it to some degree? By 1980, 81% of people in response to an economic down turn became cynical. Nevertheless, they still had hope that in some way people could care about the spiritual needs of the individual self and at the same time pursue vocational success but with a less intense competitive commitment.

 Social deconstruction. The countercultural revolution that became postmodernism began to deconstruct personas, social roles, and patriarchal, hierarchal structures. It brought the US civilized society into chaos thereby allowing or even forcing some citizens to explore new dimensions of their inner selves. The many who refused to do this became the backlash against the counterculture. The many other humans who chose to “reinvent” themselves began to enter the personal chaos that always is the necessary, though not sufficient, cause of human social and individual transformation. Divorce rates increased, and many people changed occupations or even vocations – for example, many Catholic priests got married – and many people changed religions or even left religion altogether. Some people to various degrees abandoned traditional values in favor of expressing a more individualized, personal self. This produced conflicts among diverse people who no longer shared a set of patriarchal values. For example, women celebrated their new found freedom to expand – rather than replace – their feminine personas to include masculine traits. This shift enabled them to fill so-called masculine occupations. As more and more women did this, some men clung to their masculine dominating roles in families as well as in the marketplace. This led to war between the sexes. This and other wars of diversity produced collateral damage. Many who were drawn into this chaotic phase never underwent a transformation. Instead they fell victim to various kinds of addictions, and/or they committed suicide or short of that they became severely depressed.

 While many institutions, such as the military, the health services, and businesses, only modified their hierarchal structures, higher education institutions really did deconstruct some of them. By 1959 utilitarian science began to dominate college education, but by 1970, the drive toward postmodernism converted the once powerful liberal education faculty into a disjointed general education faculty, which became subordinated to the capitalistic science power structure. Introspection coupled to a philosophical perspective fostered by the liberal education tradition deteriorated to an ever greater extent until in the first decade of the 21st century in many places it was virtually eliminated. For example, as of 2010, the president of the University of Toledo replaced the College of Arts and Sciences with three autonomous colleges (1. Science & mathematics, 2. Humanities, language and social science, 3. Performing arts). Then in 2011 plans were set in motion to convert the liberal arts general education into competency-based general education thus eliminating liberal education. In the mean time, by the 1980s the knowledge and discipline necessary for reasoned argumentation was undermined. As students embraced the ethic of self-fulfillment, they lost respect for teachers and for rational learning, and they lost interest in understanding anything in depth. Postmodern materialism, to be described later, caused many of them to abandon the little bit of introspection and creative learning that liberal education use to provide. Many also lost the desire for personal individuation that creative learning could provide.

 Deconstructing “growing up.” Deconstructing patriarchal hierarchies and functional personas enabled people to explore aspects of their “true, inner selves” covered over by being civilized. This deconstruction converted the hierarchy of the external self dominating or repressing the inner feeling self into a horizontal relationship. As a result, there no longer is an inner self. Now one merely is a “superficial self” interacting with other superficial selves and thing-events existing in a two-dimensional flatland. Each self or event has a particular meaning, but none of these meanings are higher or lower than any other. In this superimposed flatland experience, introspection no longer is possible because nothing exists below the surface. Moreover, one cannot individuate to a higher level of knowing or higher level of consciousness because just as nothing exists below the surface, likewise nothing exists above it. In the psychological experience of flatland where there is no down or up, people don’t bother to grow up. The ethic of self-fulfillment, as described earlier, implies that the traditional self can evolve to a higher, more satisfying level of individuality by incorporating aspects of the soul into an emerging new level of self-consciousness. To do this, one must deconstruct aspects of the old self. This produces a regression toward adolescence that gives in to impulse rather than comply with traditional, social responsibilities. The resulting greater spontaneity and openness can be a “regression for the sake of transforming to a new, higher self.” However, in flatland, there is no higher or lower; so the adolescent adult is stuck there apparently rejecting the very idea of growing up. Adolescents seeing this also reject the idea of growing up thus producing what R. Bly calls “the sibling society.” (The Sibling Society, New York: Vintage Books, 1996).

 Bly acknowledges that the leveling of power hierarchies was a gift. It led to the changing of the united colonies in North America to a constitutional democracy. The further expansion of this leveling led to other social advancements such as the emancipation of slaves, women allowed to vote in the 1920s, the civil rights movement in the 1950s, and other levels of individuation coming from postmodernism. But if this leveling continues to expand to destroy all hierarchies, then American culture will be destroyed. A large percentage of youth detach from parents and family, from church communities, and from teachers and school in general. Bly admonishes adults to bring these adolescents into adulthood. However, there are two problems with this approach. One is that many youth are committed to being detached and unavailable to be engaged with adults. The second problem is that traditional youths who have become adults do not know what adulthood means in the context of a postmodern society. Furthermore, those older people who have achieved adulthood – even a high level of it – via traditional values cannot use themselves as examples for the youth of today. Some of these adults must transform to a new kind of mature individualism, which, then and only then, can guide youth and other adults to undergo similar transformations. Those people not open to any such guidance must be left behind. The extreme chaos of the current fourth turning (the economic crisis) either will destroy these persons or will make them open to guidance. The AA (alcoholic anonymous) is one example of this harshly realistic transformation philosophy. It takes a “recovering alcoholic” to guide one who is in the grips of that addiction.

 Participatory, subjective individualism. Conventional, control individualism-maturity usually exemplified by men and conventional, participatory individualism-maturity usually exemplified by women provided the foundation for the 20th century, patriarchal family. The deconstruction of patriarchy that became intense by the 1970s implied the deconstruction of the patriarchal family, which, in turn, implied the deconstruction of both types of conventional maturity. The ethic of self-fulfillment of the youth culture rejected to various degrees control individualism and embraced *non-individualistic*, participatory consciousness involving expressing all of one’s personal feelings. This puts one in chaos from which may emerge new insights that in the late 1960s led to new ways of living and expressing one’s unique individuality. However, when divorced from any rational control, this self-expression becomes the autonomous feeling ego overshadowing the autonomous, rational, controlling self. In its extreme form this celebration of autonomous feeling leads to self-destruction as exemplified by many artists of the 1960s and 1970s. In a less extreme form in adults in the latter part of the 20th century, it led to the “me-first” strategy, which contributed to the housing bubble and the economic crash that emerged in 2008. Some of these adults still attempted and partially succeeded in developing a modified utilitarianism with grater self-awareness coupled with social caring; that is, they still attended to the sacred/expressive aspects of life.

 The pursuit of the ethic of self-fulfillment led many “postmodern adults” to pursue *post-conventional, participatory individualism*. This is a genuine spiritual quest that involves acknowledging the needs of self as well as the needs of others. Carol Gilligan (In a Different Voice – Psychological Theory and Women’s Development. 1982. Cambridge, Mass. Harvard Univ. Press.) characterizes this type of individuation as the simultaneous consideration of self and others that leads to an *ethic of care*. The central insight of this ethic is that the self and the other are interdependent. Failure to acknowledge this interdependence is an “active-passive” *violence* resulting in destruction to everyone; whereas care enhances both others and self. According to Gilligan, there is a shift from goodness as *ought* to goodness as *truth* involving a reconsideration of the relationship between self and other. This means there is a demand for honesty in which one must acknowledge what one is doing and then be responsible for oneself doing it. That is, the morality of one’s action should be assessed not on the basis of its appearance in the eyes of others but in terms of the validity of one’s intuitions about the action and its consequences. This entails two kinds on considerations. On the one hand, one must deliberately uncover the *needs of the self* while bracketing what others think one ought to do. On the other hand, one must deliberately uncover *the needs of other* while bracketing the needs of the self. Gilligan applied her ethic of care to resolve the dilemma of women deciding about whether to have an abortion. The same ethic could be applied to the question of getting a divorce. The Catholic Church, for example, always promotes the ethic of ought – a women should never have an abortion and one should never get a divorce; whereas Gilligan promoted the postmodern ethic of care.

 The self awareness pole of this moral debate is a reaction to control individualism or conventional, participatory individualism that leaves aspects of the self undifferentiated. As a result of extending moral obligation to self as well as others, the person begins to explore potential talents within oneself that traditional, patriarchal culture prohibited her/him to develop. For example, as postmodern views began to emerge, women became doctors, lawyers, and business managers (even CEOs) and men became nurses and homemakers-nurturers while their wives brought home the wages to support the family. This type of individual began to recognize and act upon his/her personal desires and ambitions even when they went against traditional proscriptions. As a result, these individuals differentiated participatory self-awareness and expanded it to a deeper level. This enabled them to recognize their feelings and the effects of these feelings on themselves and others and know their strengths and limits. As a result of often having to make heroic, defiant acts against traditional values, these people have a strong sense of self-worth and self-confidence. Those persons, especially women, who do not differentiate participatory self-awareness are overtaken by personal chaos that produces self-destructive behavior.

 A second danger of post-conventional, participatory individualism, besides ignoring the needs of the self, is to separate the needs of self from the care for others. Persons with a well differentiated, control individualism may seek to reconnect with the repressed inner, “feeling self” by breaking from philosophical-religious models and social roles that impose on them a responsibility to society and to significant others such as parents, spouse, children, and friends. Likewise, in the exhilaration of acting upon the discovery of their own needs and abilities, persons who begin to develop post-conventional, participatory individualism will be sorely tempted to ignore or at least diminish the care for others. They see the old morality demanding care for others as an obstacle to a person discovering his/her own inner self. The truly spiritual, creative pursuit of one’s inner self would see that the old morality must be modified and incorporated into a higher level consciousness that sees the interdependence of the needs of self and others. When control individualists or conventional, participatory individualists fail to achieve some measure of this higher level of individualism, the spiritual quest degenerates to what Yankelovich calls the root fallacy of the ethic of self-fulfillment. The fallacy is that the human self can be wholly autonomous, solitary, contained, and “self-created.” According to this fallacy, the “highest type of individual” is a person who is a creative, autonomous self, virtually independent of culture. Yankelovich argues that each person is not his/her own work of art; one does not create oneself the way an artist paints a picture or writes a poem or novel as pop psychologists would have us believe.

 The pursuit of post-conventional, participatory individualism can degenerate to the root fallacy of the ethic of self-fulfillment even when one partially achieves this type of individualism. One may become consumed with the worth of the existential self as the center of one’s non-rational feelings and intuitions. This consuming preoccupation causes one to ignore the interconnectedness of self with others and therefore ignore the care for others. Instead one identifies with autonomous feeling passion that draws a person into the chaos of jumping into the void by rejecting all rational structures analogous to what mystics do. Such persons make the heroic act of will to power in which one creates meaning for himself/herself out of the depths of his/her being. Some creative people may give themselves over to the demonic as they identify pure creativity as self-expression. This pursuit may appear to be a regression to a lower level of morality because of the chaos it brings to self and others. However, I propose that it represents a transition from a dogmatic, scientific, ethnocentric perspective to a dogmatic, aesthetic, world-centric perspective. The *radical, expressive individualism* resulting from this pursuit has negative and positive aspects. One of the major negative aspects is that such individuals tend to self-destruct. In the past these nihilists went mad, became substance abusers or attempted and often succeeded in committing suicide. On the positive side, this pursuit can prepare an individual or American culture to evolve to a more stable, higher order of individualism, which is the empathetic self. Such a perspective may shed light on the current (November, 2011) crisis at Penn State. From all accounts it appears that Joe Paterno is a hero with a well differentiated, post-conventional, control individualism, and he even may have developed participatory individualism to some extent. However, he generated a crisis for himself and for Penn State because he lacked an ethic of care.

 Finally, the development of post-conventional, participatory individualism that avoids its root fallacy still has a fundamental limitation. If the person evolving to this type of individualism does not simultaneously develop a mutuality with control individualism, he/she will not be able to thrive or even survive in the highly competitive or static, structured, bureaucratic, work world. Yankelovich points to the necessity of this mutuality from the other side, so to speak. The major task of Western culture is “breaking through the iron cage of rationalization and instrumentalism in order to make industrial society a fit place for human life.” (Yankelovich, New rules… 1981) I would say we need to transcend the dehumanizing effects of exclusive, scientific control individualism. That is, we must continue to develop control individualism in order to remain competitive, but at the same time, we must transcend to a new vision in which there is a mutuality between control individualism and participatory individualism.

**POSTMODERN MATERIALSIM**

 As will be elucidated in this course, postmodern science generates non-ideological pragmatism. But in the context of pre-2008 society, where democratic freedom is defined as exclusively expressed by free market capitalism, the science, business, technological-industrial complex progressively generated a dangerous destabilizing force to American society. The collaboration between scientific and free market pragmatism has circular interactions (positive feedback) with materialism: the pragmatism increases material benefits to individuals and societies and the material benefits stimulate increased pragmatism to obtain greater material benefits, and so on. This circular dynamism began to enter the American psyche to an ever greater extent in the context of the free market ideology coupled with government deregulation that the Reagan presidency initiated in the 1980s. This *materialistic, circular, reinforced pragmatism* (MCRP) became an attack on all ideologies that progressively overtook American college education. This MCRP generalization is one instance of the new version of postmodernism that emerged from the 1960s countercultural revolution. My interpretation of Zakaria’s book, The Future of Freedom (2003) is that what I call MCRP is *democratization* in opposition to *constitutional liberalism*.

 The democratization aspect of American democracy in the 1970s and 1980s became associated with radical, subjective, control individualism, which was the Eros-chaos drive toward greater individual freedom expressed as the “self-fulfillment ethic.” The constitutional liberalism aspect of American democracy is the Eros-order drive to limit the expression of individual freedom so that humans can not only co-exist but also collaborate to produce a stable society. Each person can choose to believe whatever he/she wants, but one’s actions must be governed by laws generated by a Constitution and enforced by a police force and army. America’s current crisis, which generated the current economic downturn, is the imbalance of Eros-chaos overwhelming Eros-order. The democratization, countercultural revolution was an anti-patriarchal search for self-fulfillment. As indicated earlier, it brought about many positive transformations in Western consciousness. But it also generated radical, ego constructivism that produced the current social and culturally unsustainable individualism. Various degrees of radical, ego constructivism leads a person to choose his/her self-validating ego to replace any higher power such as , what I call SOURCE (God) or some socially validated hierarchy of power, as for example, defined by the US Constitution. This kind of radical individualism emphasizes the pleasure principle, hedonism, and duty to self that undermines the disciplined effort to sustain a modern, democratic, postindustrial society.

**SUMMARY OF EVOLUTION TO MILLENNIALS**

 The central thesis of the book, Millennial Momentum may be thought to be the evolution toward the transformation to a new level of stability and prosperity of an emerging socialistic democracy. The GI, Civic generation (born 1901 – 1924) resolved the challenge of a fourth turning that produced the “great depression” and World War II. The subsequent silent, Adaptive generation (born 1925 – 1945) sustained and enhanced a new self-contradictory conservatism. This polarization that may be described in diverse ways was expressed on college campuses as liberal education (absolute true knowledge and natural law – “right to life”) opposing positivistic, mechanistic science (valid pragmatism but no truth and nominalism- “right to choice”). The Baby Boomer, Idealist generation (born 1946 – 1964) embraced a very masculine conservatism. But a minority of young people at elite colleges and universities rejected this masculine conservatism and in 1965 generated the countercultural revolution. A backlash of a majority of Baby Boomers produced a return to a more positive, transformed masculine perspective that glossed over its intrinsic contradictions. Especially beginning in the 1990s with the Reactionary, X generation (born 1965 – 1982) coming into power along side of the Baby Boomers, American culture became infected with the virus of radical, ego constructivism. This cultural disease began to thrive in academia and produced the increasingly expensive and degenerating college education. This cultural disease led to the economic crisis in September, 2008, which is the fourth turning that starts a new cycle. The Millennial new Civic generation (born 1982 – 2003) now must deal with this crisis.

**COLLEGE EDUCATION IS DESTROYING DEMOCRACY**

 Before the countercultural revolution enlightenment science and liberal education formed a limited partnership to promote a “scientific, liberal education.” Each member of this partnership depended on students developing an appropriate philosophic perspective. The philosophy appropriate for science was a skepticism toward all dogmas coupled with a belief that nature has a definite structure and scientists can create empirically validated theories to represent aspects of this structure. Liberal education also believed that nature has a structure, which a philosophic perspective that integrated diverse disciplines could understand. Both science and liberal education depended on students developing *introspection* that enabled them to at least vaguely comprehend these two philosophical perspectives and to intellectually grasp theoretical ideas. This partnership was maintained in spite of the growing awareness at a deeper level that there is a total opposition between science and liberal education. From the publication of Newton’s *Principia* in 1687 science is grounded on *nominalism*, which proclaims that all systems of classification depend on humans choosing what is the most practical way of understanding interactions among diverse things. Liberal education depends on Aristotle’s idea that every thing has a nature defined by one or usually several eternal forms (Plato). Sufficiently educated humans can know these forms by the process of abstraction. Correspondingly, science insists that scientific theories are valid but never absolutely true. Positivistic science that is embraced by many if not most scientists insists that any type of scientific knowledge may be valid but never is absolutely true. Liberal education insists that the most fundamental and important types of knowledge are absolutely true. The question about abortion provides a metaphor for this radical difference. Scientific relativism supports a women’s right to choose abortion. Liberal education, as exemplified by the Catholic Church and other fundamentalist, Christian churches, maintain, via the statement, “right to life,” that abortion always is morally wrong.

 The spiritual vision that supports American democracy requires that a “sufficient number of citizens” are educated to develop introspection and a philosophic perspective to understand this vision. Moreover, educated citizens, at the very least, must come to what may be called a pragmatic, transcendental vision. Such a vision would mean, for example, that two people or groups of people, wherein each commits to a dogmatic religion that radically opposes the other, nevertheless transcend this opposition in order to collaborate in a business venture.. In two ways postmodernism that emerged from the chaos of the countercultural movement tends to destroy democracy. Firstly, it converted liberal education into a general education with no unifying, philosophical vision. As a result, general education became progressively more and more subordinate to utilitarian science. Over time this led to students not developing a philosophical perspective – thus not understanding the spiritual vision of democracy – and not developing introspection, which led, ironically, to a much less in depth understanding of science. Secondly, postmodernism generated two fundamentalist viewpoints that have functioned like religions in the 20th and 21st centuries. As described earlier, these modern “religions” are: positivistic, scientific constructivism and subjective constructivism. Because each of these viewpoints is dogmatic, each is counter to the spiritual vision of democracy. Together they mount an all out attack against democracy. But the countercultural based postmodernism that began in the elite colleges and universities now has infected the core of all higher education. In the last twenty years this infection has intensified to such an extent that to various degrees *all college education is destroying democracy*.

 Postmodern materialism, especially in the last twenty years, also has generated a devastating attack on democracy. The spiritual vision of the “founding fathers” of the Constitution has evolved to an “ethic of care” for more and more people. This process of democratization began to become more intense with the “new deal” of President Roosevelt. As described in the previous section, postmodernism that promotes post-conventional, participatory individualism also promotes an ethic of care. But postmodernism has become dominated by the root fallacy of the ethic of self-fulfillment that generates the autonomous self virtually independent of society. This is the version that has infected higher education from the lowest level – students – to the highest levels – administration up to and including the president. The recent scandal at Penn State (November, 2011) illustrates the virility of this infection. Since at least 2002 and possibly before that, “the bottom line” – the capitalistic university making money - and a power hierarchy that trumpts an ethic of care. The nation became horrified to learn that just obeying the letter of the law was enough to ignore and therefore not prevent sexual exploitation of young boys. But in postmodern universities, this virulent infection causes faculty and administrators alike to promote higher education for the sake of making money. This trumps concern for students individuating to a higher level of consciousness where they have a concern for others as well as for themselves. The complementary concern for themselves would enable them to engage in a higher level of creative learning that also would prepare them for jobs in the free market.

 It is a truism that a vibrant, educated middle class is necessary for the survival of participatory democracy. Higher education indirectly is destroying democracy by putting people in the middle class in a double bind. Economics in the past several years but especially since September, 2008, accounts for this double bind. For a long time, but now (2011) more than ever, some sort of certification by post-secondary education is usually necessary for one getting a job above minimum wages. More particularly, there is a low probability of getting a better paying and more satisfying job without a college degree. Furthermore, getting a college degree is no guarantee of one finding employment. Equally disturbing is the well documented fact that many if not most college graduates have not changed very much as a result of the college experience. The graduates that are hired may not keep their jobs because of being so inadequately educated. Add to this the fact that many who go to college flunk out after one or two years. The education system is in crisis because not only has it been degenerating for many years, it has become increasingly too expensive thus generating a double bind for most people. The double bind is the negative consequences either of going to college or not going to college. If one graduates from college, he/she may not get a job or only get a low paying job, but such a person will have a debt of 10,000 to 100,000 dollars that he/she will not be able to pay, if ever, for a long time. If one does not get a college degree, chances are he/she will not be able to get an adequate paying job. Thus, the survival of the middle class and therefore, indirectly the survival of democracy is linked to transforming higher education.

**TASK FOR MILLENNIALS**

 Higher education is damaging the middle class to a much greater extent than Wall Street. There always have been greedy people. We can’t do anything about that; so get over it! But we can do something about transforming higher education. There are a small number of faculty and perhaps even a few administrators who could collaborate to transform education. Millennials could empower these academicians to start the process of transformation. Millennials and others should occupy college campuses – especially at public universities – across the country and DEMAND a transformation of college education. The demand should include the following interrelated, operationally definable ideas. First, faculty should convert 4 and 5 year degree programs into 3 year degree programs. This could be done by *narrative constructivism* – described in this course – that provides a more efficient way for an initial understanding of abstract ideas in various diverse disciplines. It also provides an integration of diverse theories. Secondly, faculty must develop teaching strategies that engage students to use metaphorical, conceptual knowing that produces creative learning, which can be validated. Students who engage in metaphorical, conceptual knowing exhibit creative learning by understanding abstract ideas in terms of their personal experiences. They should be able to express in writing their personal understanding of these ideas, and competent faculty would be able to assess this understanding. Of course this would cost faculty a great deal of time. Realistically speaking this would require smaller classes, more teachers, and perhaps a new type of teacher who may not necessarily have a Ph.D. This also would cost educational institutions a great deal more money. Thirdly, students should develop via extensive practice *creative, mindful, participatory dialogue*, which will be described in this course. A community of persons that results from this kind of dialogue would, in turn, validate it. Fourthly, students should develop *creative, mindful, collaborative dialogue*, which this course will describe. The dialogue group accomplishing a group task validates this kind of dialogue as, for example, the dialogue between Watson and Crick did in creating the model for DNA duplication via replication.