Abstract

Christian Religious Education recognizes the crisis in perception caused by eroding cosmologies and engages persons in the reformulating of Christian stories that negate a limiting materialism perpetuating consumerism destructive to life. A course is developed for theological students in which they may become aware of cosmology and its New Story, discern how it may be intentionally incorporated into the education of faith communities, use tools for creating curriculum, and generate methodologies for transformative learning. The course embodies the implications of current cosmology activating a partnership of learning through embodied knowing, conceptual imaging, visceral experience, and somatic learning.

INTRODUCTION

As reports increase about the world getting “...hotter, stormier, more unequal, crowded, violent, and less biodiverse ...” (Hessel and Ruether 2000, xxxiii), what role will Christian Religious Education play? As a field what will Christian Religious Education propose to do about a crisis of such proportions?

In seminaries and theological schools of the United States and Canada some attention is being given to environmentalism and ecology through course offerings. For the most part, these courses have been offered from the perspectives of theology and spirituality and in connection with globalization issues. Some attention has been given to this issue from the perspective of practical theology. But seminars have done little in generating courses that develop expertise for teaching and learning that engages the imagination in discovering a vision that includes an adequate metaphysics for our time. Very little has been offered by the field of Christian Religious Education and the perspective of the particular needs for teaching and learning in the context of local faith communities.

The curriculum and practice of local churches and congregations often include outdoor ministries in many forms, such as camping
programs, that are either taken for granted or perceived as peripheral to ministry. Units of curriculum that focus on creation or stewardship of the natural world have been developed by both denominational and independent publishers in accord with a Doctrine of Creation but rarely inclusive of the perspective of a theology of Nature. But even when churches make strong public statements and take action related to these environmental issues, initial practices in lifestyle and interest related to environmental concerns tend to wane, experiencing difficulty in sustaining enthusiasm or commitment. The issue is still viewed as one among many justice issues that competes for person’s time and energy (Moore 1998, 2–3).

**THE PROBLEM**

At first glance, it may appear that if religious communities could be more informed and sensitized to the state of our planet and projections about its fate, positive action would occur. Historically, Christians have focused more on the human relationship to the divine with little attention to a human relationship to the Earth. It is of tremendous importance that a literate people of faith know the context of their lives. Descriptions and studies about the state of the environment abound and have been highly publicized in scholarship and the public media. It is common knowledge that global warming is affecting weather patterns that affect life in many concrete ways such as hurricanes, flooding, drought, famine, and various extremes. Acclaimed documentaries about the state of the planet have been produced and aired to large audiences. Several years ago a documentary produced by Bill Moyers entitled *Earth on the Edge* was shown to a large audience on public television. More recently the movie, Al Gore’s *An Inconvenient Truth*, captured the public attention in cinemas across the country and in international venues. Articles in magazines are not limited to publication in *Scientific American*, but others such as *Time*, *Newsweek*, and *Vanity Fair* feature global warming on their covers (Korten 2006). Public media have published reports about and followed the development of the Earth Charter and the decisions reached by particular nations in the Kyoto Protocol and the Johannesburg Summit. Information is abundant about how carbon emissions are altering life on our globe: the effect of technology, the rapid extinction of numerous species, genetically modified organisms, deforestation, desertification,
destruction of the ozone layer, the depletion of oxygen, and increased global warming.

There is abundant knowledge about the effect of carbon emissions, but why is there a lack of action and will to remedy this? The problem has been diagnosed in many ways but in ways often casting blame and responsibility on particular groups and developments in society. Some say it has to do with the Western ethical system based on individualism and profit-seeking, some on a lack of land ethic, some on the complex interplay of forces including the use and abuse of technologies from the Industrial and the Post-industrial age, some on spiritual deficiency, or the failure of human beings to attune to the Creator of life and failure to attune to Earth (Moore 1998, 12). Denial is linked to the perceived high personal and commercial economic cost required to reverse the ecological decay.

What is to blame? What is the root cause of this dilemma? Simple analysis, at first glance, may point to technology, or to a moral failure. It is not difficult to point to evidence of moral and ethical decline. Is humanity inherently destructive? All of these initial inclinations at prognosis deserve serious attention and play a part to some degree.

**THE CRISIS**

- **However, even blame and repentance will not be enough to change what is happening. For it still does not take us to the bottom line of the crisis.**

  The Crisis at hand is a Crisis of Cosmology (Berry 1999; MacGillis n.d.; McFague 1993, 2001). In this sense Cosmology is defined as having to do with the nature and origin of the whole cosmos. It involves one’s understanding of how the world and life came to be and of one’s place in it. It holds some image of the relationship of all things and constructs concepts about the nature of relationships among beings and reality. A crisis of Cosmology is a crisis of perception and of conception. It is a crisis of Story.

  All cultures have Origin stories, stories that give understanding and explanation of how the universe was made. Thomas Berry (1988) believes that we live in a time in which we find ourselves in between stories.

  It’s all a question of story. We are in trouble just now because we do not have a good story. We are in between stories. The old story, the account of
how the world came to be and how we fit into it, is no longer effective. Yet we have not learned the new story. (p. 123)

We have more than one story that calls for our allegiance and impacts our consciousness: our creation story from our religious traditions and the scientific story of the universe. Our understanding of the world is fundamentally different from the understanding of our early ancestors in Christian faith. The Hebrews understood the sacredness of the universe; but they did so out of an understanding of the cosmologies of their day. Natural science has changed the way we live and see ourselves in the world. As older cosmologies have eroded, consciousness is left with a limiting materialism that perpetuates consumerism. This consumerism, a story from the industrial age, exerts power as if it were a religion.

For Berry, Western people are caught between the older stories of classical civilizations and the confident mechanistic scientism of modernity, both of which are under challenge today, and a new spirituality, rooted in the new universe story, that is waiting to be born. We need to create a new socioeconomic incarnation of the human species within its earth matrix. Although the technological aspects of this are necessary, the most important shift must be a renewed vision of our relation to the whole of the creation, a renewed way of telling the story of who we are. (Hessel and Ruether 2000, 613)

Several components of current thinking have affected the present relationship between science and religion: the rise of historical consciousness, intellectual revolutions in science, and the contemporary discussion of pluralism (Grant 1998, 12). Modern historical-critical judgment critiques how human life is embedded in history. Simple reporting of what someone tells us is no longer accepted as adequate for constructing history; the accounts are critically evaluated and determined credible before a historian accepts them as historically viable. Even this judgment is considered probable and open to reassessment and correction (Grant 1998, 19).

Some of the most pertinent intellectual revolutions in science that affect current thinking have come about through research in physics and biology. At least three have had great impact on how we think of the world today: “...the displacement of human beings from the center of the universe brought about by the recognition that the earth is not at its center; the recognition that the heavens are not qualitatively distinct from our experienced reality but operate under the very
same laws of physics that describe falling apples and spinning tops; and the discovery that the whole universe and all creatures on our planet are in process of continuing change and transformation” (Grant 1998, 34).

These discoveries have all contributed to a changing cosmology. It is necessary to rethink Christian cosmology, God’s relation to the world, and the vocation of humanity, with ecological seriousness from “the ground.” Cosmologies built on Greek philosophical dualism must be deeply recast in the light of both the new ‘universe story’ and a recognition of the way the older cosmologies were themselves rationalizations and justifications of human domination over other kind. (Hessel and Ruether 2000, xxxv)

CHANGING COSMOLOGIES

Cosmologies do change. Discoveries impact consciousness and influence the way we see our world and our place in it. Even a brief, simple sketch of a few of these changes based on the perspective of the development of Western thought can be revealing.

During the time that the Old Testament was written the changes in consciousness mentioned earlier had not occurred. A very different view of the world was in place. The Old Testament conception of the world included a firmament, waters above the firmament, storehouses of snows, chambers of winds, pillars of the sky, fountain of the deep, navel of the earth, and so on (Gaster 1962, 702–709). God was in this sphere and walked on the earth.

During the period of New Testament writings and the development of the early church, another cosmology had developed. The ancient Greeks were the first to build a cosmological model within which to interpret the motions of the moon and the stars and the planets and the Sun. By the fourth century BCE they had developed the idea that the stars were fixed on a celestial sphere that rotated about the spherical Earth every twenty-four hours, and the planets, the Sun, and the Moon, moved in the ether between the Earth and the stars. Aristotle identified fifty-six spheres. The model was further developed culminating in the second century AD with Ptolemy’s great system, a system of perfect circles, heavenly spheres. The Christian worldview labeled the outermost sphere, Heaven, realm and dwelling place of God and of all the elect. The next three spheres were the spheres of the fixed stars, then the Constellations, then the seven planets. At the center of the solar system was the Earth composed of atmosphere,
hydrosphere, Earth, with Hell (Satan) at the center of the Earth. Note that in this model God no longer walks on the Earth but resides in the heavenly sphere with all the elect. Also, note that the very center of the Earth has become the dwelling place of Satan. God resides in the heavenly sphere; Satan dwells at the center of the Earth: a vivid dualism, a hierarchical dualism in which spirit is separated from and above matter.

Later, Copernicus would propose a heliocentric system. In his model the Earth rotated and, together with the other planets, moved in a circular orbit about the Sun. But it would take Galileo and his invention of the telescope to confirm this model. Galileo questioned the perfection of the heavenly spheres when he was able to observe the craters of the moon, the imperfections of other planets, the four moons of Jupiter, and others. Although he was a religious man, the church would reject his reported observations. These would, however, provide a foundation for interest in probing the laws of nature (such as Newton’s laws of cause and effect, and the law of gravity) resulting in a mechanistic model of the universe. In this cosmology the “heavenly” sphere was absent; where was God? The watchmaker had left it all to run on its own.

The scientific revolution would continue to reveal an explosion of new discoveries and theories about the nature of the universe. Much later, during the early part of the twentieth century, the dominating theory for the nature of the universe would be that of “Steady-State.” In this conception the universe expands, but new matter is continuously created at all points in space left by the receding galaxies. The theory implies that the universe has always expanded, with no beginning or end, at a uniform rate and that it always will expand and maintain a constant density. The mechanistic nature had also become self-sufficient with no limits.

At this point Western Christianity was immersed in a way of thinking that imagined God as transcendent to creation, and human beings as separate from and above the rest of nature. The earth was an object to be used and cared for because of its benefits to humankind. The earth and the universe were totally material. A hierarchy of being arranged how entities were to be valued (McFague 1993, 30–36).

In 1969, human beings saw their Earth from the Moon. The image of “Earthrise” has become an icon for consciousness. This picture along with information from space exploration and the vision of the Hubble Telescope presents a radically altered modern cosmology. According to the “big-bang” theories, around thirteen billion years ago
all of the matter and energy in the universe was concentrated in a very dense state, from which it “exploded” with the resulting expansion continuing until the present. The universe was a very hot thermal soup of quarks, electrons, photons, and elementary particles. As the universe rapidly cooled, the quarks condensed into protons and neutrons, the building blocks of atomic nuclei, converting into helium and hydrogen. After millions of years the expanding universe thinned and cooled enough to condense into individual galaxies and then stars. Out of a Supernova, a collapsing star, our solar system was born, forming planets from the debris. On at least one of those planets, conditions would develop which were precisely right for the emergence of life. These discoveries have all contributed to a changing cosmology.

REFORMING PERCEPTIONS

This changing cosmology has implications for the thought of Western Christianity. As the consciousness of a new cosmology is taking shape, a reforming of perceptions is beginning to occur. Some persons of faith see implications for reforming some traditional ideas about God, Christ, the world, human nature, and other aspects of conventional Christianity. Some of these reformulations are not altogether new reclaiming aspects of Celtic Christianity and the medieval mystics as well as influences from eco-feminists, Teilhard de Chardin, A.N. Whitehead, and other Process theologians.

For the purposes of this article one issue can illustrate the task of reforming. How is this knowledge to be reconciled with the stories of creation in our faith tradition? As the older cosmologies are eroding, what are people of faith to do with their Stories of Origin? How can a Western Christian appropriate the Stories of Creation found in the Book of Genesis of the Old Testament? How is creation presented in the New Testament in the parables of Jesus or the writings of Paul? There are several responses that are already being enacted. Some decide that the Genesis stories must be accepted literally, as seen in the Creationist movement. The other response is to reject it as having no truth, as seen by scientism, scientific materialism, or religious naturalism. Some are intent on refuting it.

The popular argument between biblical creation stories and the story of evolution reveals bankruptcy in our ability to hear and interpret stories of our
heritage. The biblical stories are multiple (with four quite obvious ones), and they lend themselves to multiple interpretations. Likewise, scientific stories are multiple (including, but not limited to evolutionary stories), and they also lend themselves to multiple interpretation. By limiting discussions to creation vs. evolution, we close off many stories, many languages of wonder, and many interpretations that could open our eyes to the cosmos. (Moore 1998, 16)

Some are discovering that Genesis still conveys truth about life in partnership with the scientific story. Some of these affirmations present in the Genesis narratives are that God is the sole source of all that is; that God stands within and behind the world as its very source and structure; that creation is called good; and that creation is undergirded by grace (Grant 1998, 77–78).

**A ROLE FOR CHRISTIAN RELIGIOUS EDUCATION**

How can Christian Religious Education participate in the process of transformation that moves from the destructive nature of our time to a new era of well-being for every form of life? One way is by relating the story being composed by the new cosmology to the Hebrew stories of Creation while discerning implications for Christian ministry and discipleship. Educational processes can foster such a task for faith communities.

Some religious educators are beginning to understand the need for methodologies that promote embodied knowledge of the story being composed by the new cosmology in relation to the traditional stories of creation and human identity. In particular, Christianity has historically shown little interest in the new cosmology, opting to live out of the story of the world as told in the Bible.

A course for seminary students could provide a teaching/learning experience that assesses the components of these issues. The purpose of such a project need not be to dispute the creation stories of Hebrew origin but to imagine, to know, and to understand a relationship with the cosmic story now narrated. Theological students and those who lead faith communities need to know the relationship between central discoveries that make up the scientific worldview and the life-affirming story of Christianity. The aim is not to eliminate one way of knowing in favor of another, but the aim is to ground understanding in both the scientific empirical detail and in primordial poetic visions of the cosmos.
that augments rather than conflicts with the religious traditions’ vision of lifestyle and practice.

Religious Education knows about the power of myth and how the internalization of narratives and stories affects values, attitudes, and behaviors. Cultural narratives mold attitudes and behaviors. These cultural narratives transmitted from generation to generation form values that can be changed through new narratives (Eisler 2000, 18–19). In the study of myth “... Milton Rokeach’s work is instructive in that it demonstrates that values can be changed through the introduction of narratives that cause conflict between ostensible or consciously held values ...” (Eisler 2000, 19).

THE COURSE

The very essence of Christian Religious Education was supportive in creating the course, “Christian Nurture and the New Cosmology.” One present understanding is that Christian Religious Education empowers persons with skills to:

- Identify present assumptions;
- Name what these assumptions are within the context of Christian Stories;
- Decide whether to continue to appropriate and live out of these stories;
- Make choices about revisions and new ideas; and
- Transform vision that opens the future to hope (adapted from Groome 1991).

The Purpose of the course was to enable theological students in their awareness of conversations occurring between science and religion; to consider a constructive partnership especially concerning cosmology and perceptions of the universe; and to discern how these

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conversations may be incorporated into the education of faith communities.

The Objectives supporting this purpose were that by the end of the course the participants would be able to:

- Become aware of cosmology and its New Story
- Imagine and integrate a relationship between Christian Stories and the scientific cosmic story
- Discern how both these stories may be intentionally incorporated into the education of faith communities
- Use tools for creating curriculum
- Generate methodologies for transformative learning.

Modules—The course was divided into four modules that are briefly described below:

**Introduction and Orientation: Stories of Creation and the Cosmos**

The course began by acknowledging the crisis in perception caused by differing cosmologies. Stories and myths of creation from different cultures and times were examined. Students gave special attention to the Hebrew Story of Creation and the current story being generated by science. Possible relationships of the two were examined. This first module acquainted students with the revolutions in science that have shaped understanding of the world, the metaphorical nature of religious language, and the rise of historical thinking that impacts consciousness. Relationships between science and religion were described and discussed.

**Developing a Functional Cosmology: Paying Attention to the Natural World**

A “functional cosmology” requires an understanding of purpose and place and our relationship to the natural world. This module proposed that a Christian cosmology for our time be based on a subject-subjects model of being, knowing, and doing in place of the subject-object model of Western culture. This module invited students to “pay attention” to the natural world and to discover some basic principles inherent in the universe such as interiority, diversity, and communion. Both process theology and the evolutionary theories of science that
suggested journey were presented as a theoretical structure for this understanding. The experience of awe and wonder invited reverence for sacred place. If nature is affirmed by religious persons as a gift of the Creator, then how should such a sacred place be treated? What does it mean to embrace creation as sacred? The course invited students to ponder the sacred depths of nature and the idea of a personal God.

**Sacred Journeys: Journeys Through the Cosmos; Keeping Sabbath**

Metaphorically, sacred journeys are sometimes thought of as journeys through life, a cosmic journey, an evolutionary journey. Persons are transformed as they travel. The class experienced a pilgrimage to a special place away from normal environments and routines. This journey invited participants to wonder at the magnificence of creation and at the sorrow of a hurting earth; to wander with other members of the class across a new landscape with curiosity and hope; and to retreat in order to be refreshed and imagine a vision of the future (Moore 1998, 96–118). The module continued an exploration of an “attention epistemology” (McFague 1993, 49–55). It invited the experience of knowing through seeing and through the formation of deepened community with the natural world. Through this immersion event the class was invited to Journey and Sabbath. The class traveled to the Tall Grass Prairie Preserve near Pawhuska, Oklahoma, for exploration and discovery. There was participation in experiments of stargazing designed to engage the imagination in new perceptions of the universe. A day was spent learning about the Tall Grass Prairie, its subtle landscape and its unique ecological significance.

**Educating Congregations: Imagining a Design for a New Creation**

How does a new perception of the cosmos affect decisions about the way we live? What can we do in order to love nature? How will we live if we truly care for all of creation? This module engaged the class in the question about how to imagine a just and sustainable way to live; what will create mutually enhancing relations between human beings and the rest of the Earth Community. It examined consumerism. It asked about vocational decisions and explored challenges for the task ahead. In particular, it explored how religious education can participate in the process of transformation that moves from the destructive nature
of our time to a new era of wellbeing for every form of life, and how this new story and vision may be intentionally incorporated into the education of congregations. The implications for religious education were described through the presentation of particular methodologies and models.

Pedagogical Style. In its pedagogical approach the course sought to embody the implications of the current cosmology for education. Multiple and connected ways of knowing were acknowledged including conceptual, experiential, participative, and reflective. The course methodology focused on seeing (as well as hearing), incorporating an “attention epistemology” (McFague 1997, 26–34), coupled with confluent education processes that are aware of “multiple intelligences” (Gardner 1983). The course practiced partnership (Eisler 2000) as the model of teaching/learning recognizing collaboration between the roles of teachers and learners. The varieties of processes used in the course were designed to enable students to name their own questions and insights and to integrate their ways of knowing.

Partnership process is an integrated teaching style or pedagogy that honors students as whole individuals with diverse learning styles. It focuses not only on cognitive or intellectual learning but also on affective or emotional learning. It recognizes the additional dimensions of somatic or bodily learning and of conative learning—the cultivation of conation, or the will to act. It recognizes what Howard Gardner calls “multiple intelligences” and what Rob Keogel calls partnership intelligence. It cultivates less linear, more intuitive, contextualized and holistic ways of learning through what Mary Belenky, Blythe Clinchy, Nancy Toldberger, and Jill Tarule call “connected teaching” in their book Women’s Ways of Knowing. (Eisler 2000, 14)

Partnership teaching also relies on nonverbal experiences through art and music, drama and poetry, contact with nature, and, above all, play... the conceptual play of mature minds exploring rich possibilities in our selves and our world. (Eisler 2000, 16)

Group projects were encouraged with the expectation that students would learn from each other through the formation of a supportive community of learning. The class sought to model conversation and methods, content and process that students would find applicable in the context of their congregations.

Setting and Format. All sessions of the course were held on a weekend format, meeting on Friday evening and all of Saturday. Three of the sessions were held in a log cabin retreat center on a wooded hill
off campus in the heart of the city. One of the sessions was held on the Tall Grass Prairie Preserve near Pawhuska, Oklahoma.

The format and schedule provided blocks of time so necessary when experiential, participative, and reflective methods are used. The setting was crucial to enable a graphic connection to nature, erasing the isolation from the natural world characteristic of the academic classroom, and encouraging a focus on the intuitive as well as the cognitive. While the academic classroom was designed as a space that encourages a dominance of the mind, the class setting encouraged students to envisage and experience that learning also happens through the senses, and through bodily experiences. The setting gave students permission to “pay attention” to the natural world, relating and integrating a “sense of place.”

**Assignments.** A variety of assignments were used. This included extensive reading and creative generation of in-depth projects. Self-directed learning projects provided congruence with the cosmological concepts of multiple processes, choice, and generative connections. Several assignments unusual for academic credit were included that valued intuition, embodiment, and experience such as spending time with a particular place in the natural world, taking photographs, tapping sounds, creating scrapbooks, composing nature writing, music, and poetry. The students entered into a contract deciding the level of assignments to complete with choice about major projects to generate. These assignments included required reading with written responses, a written reflection of the “journey,” journal writing, narratives about relationship to place, weekly activities in paying attention to the natural world, and a self-directed Learning Project on planning for teaching/learning issues related to the course in local congregations.

**Transformative Methodologies.** The texts chosen for required reading and discussion presented major concepts and provided common ground for multiple discussions. The use of www.blackboard.com for sharing reports and for discussing readings provided ongoing discussion on a weekly basis and supported continuity between the four weekend modules.

Students read descriptions of cosmologies from different cultures and time periods within assigned supplemental resources. However, a crucial difference occurred for the students when they were able to see the diagrams of these cosmologies projected on the screen and to discuss together the differences, the implication of such differences, and to name what they saw. PowerPoint slides were made of these different cosmologies from Old Testament times, New Testament times
(Ptolemy), Copernicus, Steady State, and current pictures from the Hubble Telescope, as well as Earthrise and other pictures from space travel. This became a powerful tool; the students were able to see the differences and to begin to talk about what that difference meant in terms of the way a world was perceived and is perceived. They recognized through this methodology why the current crisis is a cosmological one. They could see the difference in these models and begin to connect these observed differences to the written conceptual descriptions.

One of the resources that provided an overarching image for the course was the video, *Cosmic Voyage*, used during the first session. This video helped students visualize scientific theories from the birth of the cosmos and solar system to the nature of black holes and exploding supernovas, to quantum physics by presenting a visual journey through powers of ten beyond and within planet Earth. Other videos that presented major images for the course were *The Unfolding Story, Hidden Heart of the Cosmos,* and *Water: Sacred and Profaned.* The aspects of these videos that were so important for this course were the profound visual images presented in a way that engaged the senses and altered perception. Students were engaged by complex scientific theories through these visual images in a way that transformed comprehension.

Methods that engaged students bodily were of utmost importance in changing perceptions. Although students read about the “big bang” theory and discussed other ways to name it, “flaring forth” and “cosmic egg” (Ruether 1996), when the class constructed and became a “Cosmic Walk,” borrowed from the Genesis Farm Earth Literacy curriculum, a new relationship to the thirteen billion years of specific events was owned.

This experience is similar in content to *A Walk in Time* (Liebes, Salhtouris, and Swimme 1998); however, it places the events in a ritual, combining aspects of a labyrinth and stations. Sacramental reality was activated.

The Genesis creation stories, several Psalms, and verses of Isaiah, Romans 8:19 (and related exegesis) were read and ritualized through litanies with discussion of what central truths scripture holds for contemporary culture. However, the most profound telling of the Genesis stories occurred through the use of the story and materials developed by Jerome Berryman for sensori-motor learning of religious language found in the *Godly Play* curriculum (Stewart and Berryman 1989, 92–95). Adult students were given permission through this process to
connect, to reimagine, and to begin their own reforming of meaning available in the ancient narrative.

Crucial to the entire course was the bodily way of appropriating what we have come to know through scientific discoveries that involved aesthetic and affective components. The methods were designed “. . . to enable persons to transcend the split modern condition of experiencing the world one way, while knowing the truth of the world is otherwise” (Swimme 1996, 24). The methods that were most successful in doing this were created by a cosmologist to provide “. . . a transformative process where one can learn to see and to feel the world in a way congruent with what is actually happening” (Swimme 1996, 24). For example, the class engaged in the simple guided experience at sunset of focusing on the horizon in a way in which they were able to feel the earth rolling over.

We focused on the horizon, viewing Venus and Jupiter, and reminding ourselves of the differing distances from the Sun.

Simply by focusing on the experience and viewing it through the theoretical model of the solar system’s form, there comes a wonderful moment when you enter into it all at once: you feel in an experiential, imaginative, and direct way the Earth slowly turning away from the Sun. You have a sense of the plane in which the planets move, and even a beginning recognition of the great distance to Venus. You will also feel, and perhaps for the first time in your life, the immensity of the Earth as it rolls away from the great Sun. It happens in a flash. A single surprising shudder passes through you and you realize you are standing on the back of something like a cosmic whale, one that is slowly rotating its great bulk on the surface of an unseen ocean. (Swimme 1996, 27)

We became acutely aware that the sun is not setting; it is the Earth that is moving and turning over. We reflected on how even our language comes from an old cosmology!

Later, in the evening, with only the light of the stars, we spread our tarps on the ground to lie down and try some stargazing. As our eyes adjusted, we began to be able to see millions of stars. Class members volunteered their knowledge of constellations learned in astronomy class, and we discussed how the ancients had perceived the heavens and named it. Then we imagined ourselves as we were at that moment, held tightly to the Earth only by gravity itself, and though looking up, were asked to shift perspective and look down into the universe! Our subjectivity was transformed.
Now, as you lie there, imagine yourself peering down into the great chasm of the night sky. If your imagination is strong enough you can enter quickly into a new experience. Otherwise it might take some time, but the moment will come, in a rapid reorganization of phenomena, when all those stars will be experienced as down below, far, far below, and the amazing feeling accompanying this experience is a sense of surprise that you are not falling down there to join them. But of course you don’t fall. You hover in space, gazing down into the vault of stars, suspended there in your bond with Earth. (Swimme 1996, 52)

It was true, through the imaginative power of our senses, and the courage for re-education our subjectivity was transformed. We had truly entered into a visceral knowledge of the new cosmology.

This experience of feeling yourself embedded in the whirling solar system is certainly not solely cerebral. There is always a strong emotional and bodily experience in any entrance into the universe. Such moments are often even tinged with a kind of ecstasy. And unless this full-bodied experience is pursued, we are settling for abstract understanding rather than a full initiation into the universe. (Swimme 1996, 31–32)

The next morning we rose well before dawn and traveled to the edge of the Tall Grass Prairie Preserve and waited with yawning patience in the darkness. We had covenanted to observe a time of silence during this early morning experience. We listened to the nocturnal sounds of the prairie, and to the increasing volume as the distant glow of first light began to appear on the horizon. As if controlled by the intensity of the coming light, the volume of nature voices crescendoed to a full cacophony as the Earth rolled us over into the brilliance of a waiting Sun.

These methods invited the class to embrace and to own the reality that there is no new water on earth, only what has been recycled four billion years through steam, clouds, glaciers, dolphins, polar bears, soil, plants, and the baptismal fonts from which we baptize our children. Through this experience we came to know that the very air we breathe is the only air there has ever been or ever will be (the air Jesus breathed and Joan d’Arc, the air our grandmothers breathed, the air we breathe, and—what about our grandchildren?). These methods invited participation in an inner transformation. These methods provided a profound educational experience in shaping human consciousness.
CONCLUSION

This course demonstrated the kind of methods that can create a new consciousness for theological students and persons in local communities of faith that can transform practice. It engaged processes that can change hearts and the commitment of will. The processes used by the course activate a partnership of learning through embodied knowing, conceptual imaging, visceral experience, somatic learning. It provides sensori stimulus and imaginal concepts that shift perception.

The course formed a community of learners that developed a shared consciousness regarding cultural narratives and myths that can impact attitudes and values. The course explored how these may be changed by new narratives appropriate for sustainable and flourishing ways of living. This learning community was able to dwell with despair, and yet to embrace a new vision of what our role and place can be in the universe—a vision of illumined hope and the will to act.

In the dark of the moon
In the dead of night
In the dead of winter in flying snow,
The world in danger,
Families dying, war spreading,
I walk the rocky hillside sowing clover.

(Wendell Berry 1987)

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