Pergamon

Technology in Society 21 (1999) 393–407

Technology In Society

www.elsevier.com/locate/techsoc

# A spiritual experience of cyberspace

Jennifer J. Cobb

*Luna Information Systems, Oakland, CA, USA*

**Abstract**

A meditative experience within a virtual reality artwork serves as the jumping off point for an extended thought piece focusing on the issue of the relationship between embodied spirituality and cyberspace. Cyberspace is a particularly disembodied medium, a space of thoughts, ideas, and information communicated in words and images; it is not a place where our bodies participate. As such, cyberspace has the potential to further split our minds from our bodies, a cultural trajectory that is well-documented in Western culture. In their current implementation, computers seem to propel us further toward this disembodied place, becoming, to borrow Walker Percy's phrase, "cosmonauts in cyberspace". This notion borrows from both a hope and a fear. We have the desire to escape the messy and mortal sphere of the body while, at the same time, we are afraid that the alternate realities offered by cyberspace will suck us in, pulling us step by step away from the organic world that gave us birth. This article suggests that the split between mind and body is not inherent to cyberspace. Rather, cyberspace acts as the perfect foil for furthering our splintered experience of mind distinct from body. But if we approach cyberspace as part of a larger, integrated, sacred experience of the world, our perspective begins to change dramatically. In this context, cyberspace can enable us to expand and enrich our embodied spirituality. 

## 1. Introduction

I breathe in and float upward, passing through shimmering globes and layers of ephemeral, earth-toned patterns. I lean left and drift through a dreamlike, leaf world, chasing receding balls of light. As I drift, ethereal voices float around my ears, melodic and yet indistinct male and female bits of song that respond to my movements. I exhale and sink into the trunk of a vast tree set in the midst of a large clearing. The interior of the tree glows with an odd luminescence as I follow channels of light-infused sap, moving through its depths by merely leaning my body and breathing.

0160-791X/99/$ - see front matter 
PII: S0160-791X(99)00019-6

I am inside *Osmose*, Char Davies' virtual reality artwork. This unusual application of computer technology delivers me into a dreamscape where my logical facilities melt into a deep, meditative awareness centered in my breath and body. As I breathe in, I float up in the world; as I exhale, I float down. Davies achieves this simple and yet utterly unique technique for navigating virtual space by using a chest harness that monitors my breath. This harness includes a breathing and balance sensor that tracks my body's movement in real time. When combined with the 3-D virtual reality (VR) helmet I wear on my head and fat cables linking the whole ensemble to a high-powered, parallel-processing Silicon Graphics Onyx computer, I become immersed in cyberspace in a way that explodes my previous conceptions of the medium.

I am not alone in this reaction. A consensus has emerged among those who have experienced immersion in Osmose that it inspires feelings of deep peace and reverie, inducing a quasi-meditative state of awareness. "Immersants", as Davies calls them, speak of feeling connected to themselves and the world in a new way after a journey through Osmose. Media theorist Brenda Laurel calls Osmose "breathtaking" and comments that it is "a fundamentally powerful use of technology in the service of, dare I say, nature. There's a healing there, not just of individuals, but of the technology itself" [1].

This healing is precisely Davies' goal. Cyberspace, in its current manifestation, tends to further the split between our minds and our bodies. We enter it via a flat, two-dimensional screen and engage it primarily with our minds, for the most part leaving our bodies behind. In fact, for many cyber-aficionados, in the context of cyberspace the body is reduced to "meat", a characterization that denigrates and minimizes the profound power of physical experience.

As Davies' work demonstrates, the radical objectification of the body in the context of cyberspace is not an inevitability produced by the medium itself. Instead, as Sherry Turkle's [2,3] work amply demonstrates, cyberspace acts a mirror that reflects a wide variety of cultural needs and conditions. When it comes to the subject of our bodies, cyberspace reflects our entrenched habit of splitting our minds from our bodies, thereby reducing the primal power of our physical selves.

This well-documented cultural trajectory, also known as the "mind-body split," has had devastating consequences, not only splitting our minds from our bodies, but severing humanity in general from the earth that it inhabits. As a result of this split, mankind seeks to objectify and control the physical world, reducing nature to a complex of resources to be plundered at will. This attitude has not only contributed to environmental degradation at an alarming rate, but it has almost wholly excised the physical from our sacred reality, decentering our spiritual lives and casting us adrift in an objectified world.

When viewed through windows, menus, and icons, cyberspace seems the perfect bedfellow for our disembodied reveries. But this scenario reflects our own reality, not the reality of cyberspace itself. If we approach cyberspace from the perspective of a splintered self, we will re-create this dualism in cyberspace. If, however, we see cyberspace as a part of a larger, integrated, sacred experience of the world, the picture begins to change dramatically. Artists like Davies are beginning to break

through into new experiences of cyberspace that are guided by deeply felt, sacred, and holistic understandings of the world and our role in it.

## 2. Bodily wisdom

The first time I immersed in Osmose, I came to the environment with a heightened sense of my physicality—I was almost 6 months pregnant with my second son. For me, pregnancy is a time of deep, physical awareness, much of it unpleasant. At 6 months, I was still experiencing fatigue and nausea. In this light, the ability of Osmose to engage my body in a new way was a welcome change. As in meditation, my focus shifted to my breath, centered and grounded in my body. Through my breath, my body became a source of calm. I found myself falling slowly into a state of reverie tinged with delight as I drifted through Osmose with my baby kicking inside my swelling belly. In the session, time collapsed and I was shocked to find when I came out that I had been immersed for 45 minutes, an unusually long time.

While in Osmose, I found my analytic sensibility dissolved as I floated between its various worlds. When I first entered the environment, I saw a three-dimensional, phosphorescent green grid against a black background. This "Cartesian" grid quickly faded as I entered the "Clearing", a dim space suffused with filtered light. As my eyes adjusted, I saw in the middle of the clearing a majestic tree standing in front of a pool of water. I leaned forward and moved toward the tree, entering it, going deeper, moving into its leaves. As I exhaled, I sank into the root system of the tree, entering a space with a profound earthy quality. Again I leaned forward and found myself back in the clearing. I saw a trail of small lights, like fireflies, floating away in the distance. I followed them lazily, moving between the Leaf world, the Tree, the Clearing, and the Cloud world above. At one point, I sank down into a pond at the foot of the tree, entering what Davies calls the "Abyss", a world of seemingly infinite space in which floated a shimmering ball. As I moved toward the ball and entered it, I found myself back in the clearing once again, a neat circularity that further short-circuited my ability to create a linear experience of the space.

Once I became accustomed to the general parameters of Osmose, I tried to float upward as far as I could. To my surprise I found beyond the clouds the "Text" world, a space of floating words. As I am a person who is generally tantalized by evocative and poetic phrases, I quickly grew impatient in this world. My intellect had shut off and I was not ready to re-engage it. I exhaled and sank, moving down through the Clouds, the Clearing and the Earth until I found myself in another world of Text floating on a black background. This was the "Code" world and it was composed of all the software code Osmose employs to generate its images. In this world I became deeply anxious. I did not want to be in the Code, I wanted to be back in the archetypal images of nature. Responding to my emotional state, I focused all my attention on rising to escape the floating, numeric sequences.

My experience in Osmose threw me back on myself, gently prodding new awarenesses to the surface. I noticed that I was deeply comfortable in the most ambiguous of the spaces—the transitions between the various worlds. When each world became

clearly recognizable—as tree, leaf or pond—the luminous quality of the floating lights receded into the background. At that point, I began to interpret and distance myself from my immediate experience. My response was to return to the transitional spaces where the images and the sounds floated around me in an indistinct yet beautiful and soothing way. I also found my antipathy to the Text world and my deep anxiety in the Code world fascinating. These were unexpected responses generated from deep within my psyche, responses that escaped my interpretive abilities.

In the hours following my immersion, images of Osmose continued to surface in my mind's eye. At one point, I was powerfully reminded of a passage I had recently read from a book by Stuart Kauffman, a scientist at the Santa Fe Institute. Kauffman's book, entitled *At Home in the Universe: The Search for the Laws of Self-Organization and Complexity*, explores his thesis that the emergence of life can be scientifically explained through the study of self-organizing systems. Kauffman believes that life is, for a variety of complex reasons, an inevitability in the trajectory of evolution. Early in his book, when describing the gestation of a human embryo, he writes, "The magic of ontogeny lies in the fact that genes and their RNA and protein products form a complex network, switching one another on and off in a wondrously precise manner" [4].

When reminded of the passage, I suddenly understood it in a new light. Life, I thought, is emerging in my belly right at this moment, and the magic is much larger than my genes and RNA. There is magic in the peace I feel and the visceral sense that that peace is connected in some deep way to the peace women have felt for thousands of years as they gestate their children. This is a bodily magic beyond my RNA that is related to the fact that growing inside of me is a sliver of myself joined with a sliver of another person, my husband. Through the experience of gestation, I feel both my own uniqueness and, at the same time, how deeply connected I am to the greater whole of human evolution.

This deep sense of interdependence flies powerfully in the face of evolutionary theory. In the world of traditional evolutionary science, sex is a puzzle. Evolutionary scientists argue that if evolution proceeds through natural selection, through survival of the fittest, then an act that relies on two individuals each cooperatively contributing a piece of genetic material does not make sense. In a world strictly guided by competition, evolution would logically create ways for each individual to selfishly pass on his or her own genes in a dominant way. Why, evolutionary theory asks, did sex evolve as a solution for reproduction? The answer seems clear enough to me.

The experience in my body tells me that sexual union leading to new life creates a deep awareness of cooperation and interdependence, linking me inextricably into a larger whole. But why does this confer an evolutionary advantage? It doesn't necessarily, until one considers the telos of evolution, its hidden, spiritual core. From a sacred perspective, evolution has a purpose, a direction, toward greater unity that is just as much a part of its reality as natural selection. The Judeo-Christian tradition identifies this evolutionary trajectory as toward greater unity through love. This telos of evolution is a subtle but powerful force that must be felt, sensed, and intuited through the wisdom of the body, mind, and spirit working in unison.

In my pregnant state, my awareness of the telos of evolution was heightened. The

sense of spiritual peace I felt stemmed from the profoundly personal and yet communal nature of the miracle unfolding inside me. This seemingly paradoxical, ambiguous experience exemplifies body-based wisdom. Our bodies both contain and isolate us while at the same time, their needs, cycles, and history link us into a continuum of cooperation with the rest of the planetary community. The contradictions that my body embraces—its depths, its emotions and, ultimately, its spiritual core—are those that science wants to ignore. It is in these contradictions that Osmose ultimately finds its spiritual power.

## 3. Descartes revisited

Char Davies thrives on ambiguity. As a computer artist and one of the earliest members of Softimage, a highly successful computer animation company, Davies has become accustomed to the varied demands of the working artist and the businesswoman. As I sat in her corporate office looking through a bookshelf that mingles writings on philosophy, ecology, art, and theology with computer software theory, I was struck that this is a women who has learned to find creative sustenance in shifting fluidly between apparently contradictory roles. In essence, what Davies' life experience has taught her is that the journey, and not the destination, is the key to creative wholeness. This insight is a perfect foil for cyberspace, a medium the soul of which is composed of movement and process.

Davies began her professional career as a painter and visual artist. She pursued these media for 15 years, using them to explore the primary thematic material that she characterizes as the relationship between the inner, spiritual, subjective world and the outer physical world, or what she calls nature. Davies traces her fascination with the archetypal dynamic between inner and outer to a mystical experience she had some 20 years ago. She describes herself in a field at dusk when "suddenly, for an instant the boundaries of my mind expanded to merge with the horizon, creating a sense of union between self and world that I have longed for ever since" [5]. This moment in the field drove Davies to find an artistic medium capable of communicating the sensual, full-body experience that was the core of her experience. In the mid-1980s, Davies discovered the three-dimensional computer animation of artist Daniel Langlois. Fascinated by the potential of his images, she sought him out. A few years later, when Langlois founded Softimage, Davies joined him and the two worked for several years to build a company dedicated to producing high-quality computer animation software. The company was enormously successful. Softimage software is widely considered the best in the computer animation industry and is responsible for the effects in such movies as "The Mask", "Jurassic Park", and "Jumanji". In 1994, Microsoft bought Softimage. Since that time, Davies has retained her role as director of visual research at Softimage, but has concentrated her efforts on pushing the company's products in new, more artistic directions. Osmose is the result of these efforts.

Davies describes Osmose as "about *being-in-the-world* in its most profound sense, i.e. our subjective experience as sentient, embodied, incarnate beings embedded in

enveloping flowing space" [5, p. 3] As an artwork, Osmose is "motivated by the desire to heal the Cartesian split between mind/body, subject/object, which has shaped our cultural values and contributed to our dominating stance towards (and estrangement from) life. In this context, Osmose seeks to re-sensitize-reconnecting mind, body and world" [5, p. 3].

Davies' statement at first seems to be something of an oxymoron. Computers serving to reconnect mind, body, and world? Davies' medium, virtual reality, has its roots in military applications. It was originally created by the Department of Defense for flight training simulations. Since the technology has entered the public domain, the vast majority of implementations have continued with this theme of simulating the real world by seeking to recreate some semblance of our world, albeit in a heightened way. VR designers constrain the medium through "solid" walls and familiar, clearly defined "rooms" or "buildings". Participants in VR commonly navigate these pseudo-Cartesian worlds as though they are driving, using conventions such as pointing, joysticks, or virtual hands. This means of moving through the space emphasizes the experience of an external, objective world.

The desire to recreate our reality in a realistic and yet oddly sanitized form, the Holy Grail of the vast majority of VR since its early days, reflects many of the basic impulses in the computer graphics world in general. In 1989, the early days of VR, artist and educator Richard Wright summarized this mindset when he wrote,

> The perception of computer imagery … is one of faultless presentation, accuracy, and a commitment to the myth of self-justifying technological progress …. What [is sought] is a kind of 'realism' that tries to describe the world with an insistent, even authoritarian, accuracy that is overwhelming. It is as though the corporate power of the media had joined up with the methodological rigor of the mathematicians and scientists to create some final, definitive and coercive depiction of the visual world [6].

Understood in this context, it is no surprise that a cultural confusion has been generated around cyberspace, assuming that we have to choose between organic and cyber-realities. When cyberspace is held up as a better, cleaner version of organic space, we are seduced. But this seduction hides a thorny nest of problems, not least of which is that we cannot really leave organic space behind. We are embodied creatures, and our physical, emotional, and spiritual health depends upon being in our bodies in a deep and respectful manner. When we try to escape this reality, entering the computer-generated fantasies of TV and advertising, we disempower our own body-based imaginations. After all, in these hyper-real worlds, whose fantasy are we entering and what vision drove their creation?

The heightening and objectifying of reality that characterizes most of the implementations of cyberspace is certainly not new in our culture. Robert Romanyshyn, in his book *Technology as Symptom and Dream*, argues that one important thread in the development of a technology, which encourages us to objectify the world and leave our bodies behind, can be traced to the development of linear perspective vision. This way of seeing the world emerged from a technique developed

in the 1400s in which painters literally created a mathematical, life-sized grid that they placed between themselves and their subjects. The grid created a firm separation between the viewer and the viewed, between self and world. In this process, the self was transformed into a spectator and the world became a spectacle. As Romanyshyn writes, "The shift is from the created order of nature to the creation of meaning established by the self in its withdrawal from the world" [7].

The self behind the window is a self that has disengaged from the physical world and from its own body to become a being of almost pure mind. We can hear in this development a clear echo of Plato's wish to move away from the messy reality of embodied experience toward the pure world of ideal forms. The outcome of this perspective is that the world viewed through the window becomes a mathematically defined, geometric, and ultimately fragmented universe. The world engaged by the self mutates into a universe of rational intellect. As Romanyshyn explains,

> The hegemony of the head leaves no room for the pantomimic body, for the body with its power to generate spaces, to create situations. Within the linear, and homogenous, space of explanation, within that grid where all space has become equal and the same, the heterogeneous pantomimic body has no place [7, p. 115].

In other words, there is no room for embodied wisdom in the world of linear, perspective vision.

In its current implementation, computers seem to be propelling us further toward this disembodied place, becoming, to borrow Walker Percy's phrase, "cosmonauts in cyberspace" [8]. This notion borrows from both a hope and a fear. We have the desire to escape the messy and mortal sphere of the body while, at the same time, we are afraid that the alternate realities offered by cyberspace will simply suck us in, pulling us step by step away from the organic world that gave us birth. What we really want is to have the best of all worlds. We would like to have bodies that are forever young, beautiful, and free of pain, that inhabit a clean and orderly, natural world free of forces that are beyond our control.

In *Lost in the Cosmos*, Walker Percy writes, "Every advance in our objective understanding of the Cosmos and its technological control further distances the self from the Cosmos precisely in the degree of the advance—so that in the end the self becomes a spacebound ghost which roams the very Cosmos it understands perfectly" [8, pp. 12–13]. It may be no coincidence that cyberspace has emerged as a cultural force at this time. In its current form, cyberspace offers us a way to push the limits of ghosthood. Through it, we can roam the universe of information at will, our minds cast loose in the infinite, discursive Net. But in this wandering we are becoming hungry ghosts. While we cram ourselves with information, we thirst for connection, depth, and spiritual meaning in our lives. We discover a need for the wisdom that only our bodies and a deep experience of the natural world can bring.

There is a flip side to this story. The ghostly realm of cyberspace has the potential to push us back into the organic world with new eyes. Many astronauts who circle the globe report awakening to a profound love for the beauty and fragility of our

planet when they are able to view it from afar. A similar dynamic may be in play between us and cyberspace.

The particular form of understanding that can emerge in the interaction between the human and cyber worlds is precisely the point for Davies. When Davies immerses us in a world that explodes Cartesian space, that relies upon our inner, subjective experience for its power, she seeks to "enable us to experience our place in the world afresh" [1, p. 1] This is one of her primary goals, and she is fond of quoting Gaston Bachlard to emphasize the point: "… by changing space, by leaving the space of one's usual sensibilities, one enters into communication with a space that is psychically innovating …. For we do not change place, we change our Nature" [1, p. 1] The ambiguous, fluid, and spatially unfamiliar world of Osmose—where the virtual body hovers and floats in a digital terrain unhampered by gravity—opens our senses for a new relationship to the organic world when we re-enter it. It is Davies' hope that these various elements in Osmose will "work together to loosen the mind's rational hold, dissolving the subject/object dichotomy, and, in a dream-like way, [shift] the immersant's mode of experience away from the everyday bias of eyesight to one that resonates deeper within the physical body" [1, p. 3].

In eliciting a paradoxical experience of embodiment, Osmose invites us to re-examine the relationship between bodies and cyberspace. Osmose is an abstract space that calls us to be *grounded* in our physical bodies. In it we are both embodied and disembodied simultaneously. As Davies writes,

> In Osmose, this paradox is amplified. After a certain period of immersion (usually about ten minutes), various conditions related to the imagery, luminosity, semi-transparency, spatial ambiguity, slow subtle transitions between the worlds, evocative resonant sounds, along with solitude, deep breathing and maintaining one's center of balance within the space all combine to create a distinct shift of awareness as he or she lets go of the rational urge to control, and boundaries between inner, outer, mind, body, space and time begin to dissolve [1, p. 6].

Paradox has a special role to play on the road to spiritual awareness. Perhaps the most fundamental paradox in our experience is that between mind and body. Spiritual experience can reconcile this paradox as it enables us to feel a connection to all that is from the locus of bodies that clearly keep us separate. We are connected and yet disconnected at the same time. The enabling force in this reconciliation is "transcendence" or what many traditions refer to as "nonduality".

Accessing the transcendent aspects of spirit enables us to move beyond the paradoxes generated by the mind and its relationship to body and spirit and into a place of oneness. From this perspective, paradox dissolves. As Wilber reminds us, paradox is a condition generated by mind [9]. Therefore, paradox and ambiguity can serve as signals that we are in the realm of mind. Reconciliation and wholeness require incorporating an experience of spirit. As an integrative space that brings together the cyber and the bodily, the worlds of code and text with the dreamscapes of artistic vision, Osmose represents a hopeful next step as we struggle to integrate the complex and confusing contradictions of cyber, spirit, and body.

## 4. Embodied wisdom

The language of the body speaks in a mysterious tongue for those of us born and raised in a Western, scientific culture. Embodied wisdom is not revealed by our outward gaze. We cannot see it, dissect it, or objectify it. This wisdom evolves through the worlds of sensation and emotion, realms we have been acculturated to ignore. Fueled by intuitive imagination and galvanized by a deeply felt experience of bodily reality, this wisdom covers a spectrum of sensation, from excruciating pain to sublime pleasure, from transcendent moments of sexual bliss to the terrifying knowledge of our mortality. In all of its guises, bodily wisdom can be one of our greatest teachers.

Bodily wisdom transforms the body from a collection of atoms to an awesome process that is more than the sum of its parts. As such, bodily wisdom is fundamentally emergent. In this sense, the deeper wisdom of the body is accessed through an understanding of the larger processes that guide the universe, of the primal truth that life is a journey, a continual unfolding and becoming. Embodied wisdom, which speaks in circles and not lines, is a direct link into the sacred, connecting us not only to the earth but to the possibility of a creative divinity that reaches beyond the mind into the soul and spirit of each of us.

All the world's religions have long histories of embodied practice that serve to join the whole of who we are with an experience of divinity. In the Hindu tradition, Hatha Yoga, one of the eight limbs of yogic practice, offers a profound, body-based meditative practice. In Islam, the tradition of Sufi dancing brings the practitioner closer to his or her God. Fasting, vision quests, ritual feasts and breathwork—some variety of these practices can be found in most religious traditions. As theologian Margaret Miles has amply demonstrated in her book *Fullness of Life*, we in the West have a long tradition of embodied practice, a tradition that we would be wise to recall as we reach into a future saturated with the potentially disembodied networks of cyberspace.

The Western tradition of embodied spiritual practice is most often referred to as asceticism. Contrary to popular belief, argues Miles, ascetic practices are not intended to deny and harm the body. When undertaken correctly, these practices enable us to achieve greater self-understanding, overcome habituation and addiction, gather and focus energy, change our cultural conditioning, and intensify or expand our consciousness. Rediscovering these practices offers a means for us to honor the traditions of our past while simultaneously reaching forward toward increased vitality, human dignity, and freedom.

Asceticism, as Miles presents it, is essentially a series of disciplined, life-enhancing practices that enable one to achieve a greater unity of soul and body. She is careful to distinguish between positive forms of asceticism and those forms which are based on the "idea of a closed energy system in which the soul gathers energy at the expense of the body" [10]. These beliefs she refers to as the "old asceticism" which she claims to be punitive and masochistic, dependent upon an antagonistic attitude between mind and body. This old asceticism, she points out, remains with us in another form today. Many of us are deeply addicted to behaviors that steal

from the body to soothe the psyche-habits such as drug and alcohol dependency, overeating, and overwork. These are all practices that damage our bodies, deadening our connection to our souls, and inhibiting the natural unity of our beings. As Miles argues, the reclaiming of healthy ascetic practices, which she calls "positive asceticism", can help us to overcome these addictive behaviors.

Positive asceticism is founded on a series of primary insights. The first is that the body and the soul are intimate partners. When the body is altered by ascetic practice, the soul is altered as well. If the body remains in a pattern of habitual behavior with regard to its interaction with the world, if it takes in drugs, sex, or food habitually and unconsciously, the soul too will remain in habitual and unconscious patterns. It follows that ascetic practices should be "fully as good for body as for soul" [10, p. 160]. Positive asceticism does not include hair shirts, endless fasts, and self-flagellation.

Ascetic practices should only be undertaken on a temporary basis, and should be directed clearly and specifically toward a particular problem. With this end in mind, Miles points to a set of ascetic practices that she calls "perennially useful". These include short fasts, meditation, prayer, and breathing exercises. In our information-saturated world, Miles recommends not only fasts from food and alcohol, but fasting from the media for a period of time, allowing ourselves time to experience the world in a new way.

Positive asceticism reminds us that disciplined, body-based practices help us to wake up and make conscious choices. Conscious choice-making not only has profound implications for our personal and spiritual lives, but for the communal life we live upon this planet. When embodied spiritual practice is grounded in such simple activities as eating, sleeping, and walking along the city streets, then each aspect of one's life has the potential of being consciously chosen. Practices such as these naturally raise our self awareness, enabling us to access portions of our psyche that are usually clouded from view.

What all ascetic practices point to is the unavoidable truth that what we *do* is as important as what we *think*. Changing what we do, not just what we think, is what really counts in the end. As Miles writes, "If we take seriously the admonition that changes in the habits and condition of the body open the soul to greater insight, we understand the need for a new asceticism. We find ourselves cluttered with habits and addictions that deaden our sense of lifefulness" [10, p. 163]. Disciplined practice grounds choice in the body, enlivening and strengthening both body and spirit. In this context, faith in the power of the spirit to transform one's life becomes a lived reality.

We now stand at a new stage, one in which we struggle to move to the next step in the evolution of our embodied wisdom and practice. This new wisdom must blend the discoveries of science with the world of feeling and intuition. We cannot go back to the ways of our ancestors; their world was fundamentally different from ours. We are not intimately involved in making or producing our food, clothing, and shelter. Our bodily needs are no longer the center of our experience. What we can glean from the past, however, is insight into a type of wisdom that we crave, a wisdom based on an experience of spirit infusing all of who we are. How we achieve this goal in a world that seems increasingly inimical to our bodies is a challenge

that each of us must meet in our own way. One thing is clear, however. This challenge will require that we activate our rational, spiritual, and embodied imaginations in a fundamentally new way. In this quest, cyberspace may have a particular role to play.

## 5. Bodies in cyberspace

The two-dimensional, data-centric interfaces that we currently employ to enter cyberspace offer only the merest glimmer of the true nature and potential of the medium. In a point-and-click interface, data objects in the form of menus, icons, and soft buttons objectify our interaction with the world of cyberspace. It should come as no surprise, in this context, that we tend to think the world of cyberspace is made up solely of two-dimensional objects. Like the technique of perspective vision, the window through which we view the world models the world that we see. Two-dimensional interfaces mask from view the fundamental, process-oriented nature of the digital world. Brenda Laurel, a VR pioneer and media theorist, writes that this data-oriented form of interactivity "usurps the kind of deep participation that we have in paintings, films, poetry, or landscapes—the experience of the free imagination collaborating with the work. Interactivity stuffs cotton into the portals of imagination. Deep participation is, I believe, indisputably a human need; interactivity is a counterfeit solution" [11].

Creating deep participation in cyberspace has proved an elusive goal. While sacred experiences can be had within the context of the two-dimensional, text and symbol-based, interfaces of today, they are more of an unexpected accident than an intentional activity. But according to Laurel and Davies, virtual reality offers a promising alternative. Laurel writes that VR

> … was not a logical successor to the brain-in-a-box. In fact, VR turned computers inside out. The brain-in-a-box computer has no body; VR uses our bodies as its instrument. Rather than presenting framed pictures or pull-down menus, VR gives us a first-person, body-centric view. Computers—even today's frisky little portables—immobilize the body in front of a keyboard and screen; conversely, VR relies upon human movement and kinesthetic sensations to achieve its effect. VR qualifies as what Marshall McLuhan described as an 'anti-environment'—an inversion that turns the existing environment into an object of attention, scrutiny, and criticism [12].

The environments in which we find ourselves, the places in which our bodies reside, situate us in a particular point of view. As I sit in front of my PowerBook writing these words, my intellect is functioning at the forefront of my experience. When I take a break, rising from my desk and walking to the window to observe the overcast sky and a cluster of people talking in the street below, my mind relaxes. The inner and the outer worlds connect; the experiences of the body effect the mind and the soul. Entering a world in which archetypal elements form the primary experience of

reality invites us to transcend our enculturated sense of objective embodiment. This experience is clearly at the heart of the power of Osmose.

It is also the goal of Placeholder, a virtual reality environment created by Brenda Laurel, Rachel Strickland, and Rob Tow of Interval Research Corporation. Placeholder, an immersive, interactive research project undertaken at the Banff Centre in Alberta, Canada, explores the relationship between place and narrative in the context of a virtual performance piece. Placeholder simultaneously immersed two participants in a series of three virtual environments in which images were drawn from video footage of three actual locations in Banff National Park: a hot spring located inside a cave; a waterfall in a canyon; and a series of rock formations hanging above a river. Rachel Strickland explains that the goal of using this quasi-documentary technique was to capture the *genus loci* or the "guardian spirit of the place". This was achieved in part through identifying and enhancing the particular qualities of each place. "For example," Strickland writes, "it was determined that the waterfall model should incorporate video to render the dynamic flow of the water. The sense of the cave should be auditory rather than visual—a dimly illuminated quick sketch surrounding a lively array of localized sound sources" [13].

The narrative elements that led people through the virtual landscapes were drawn from ancient Neolithic and Paleolithic myth and iconography. The designers of the piece elected to create four "spirit critters"—Spider, Snake, Fish and Crow—that the participants would embody through the use of "smart costumes". Once a participant took on the body of the critter, he or she would move, speak, and even see from the critter's perspective. This convention had the effect of highlighting the experience of being embodied in new and different ways. Laurel reports that once most people embodied a critter, they began to act and move as that critter would, further opening the possibilities for narrative play in the environment. Laurel comments that,

> If VR is to be used as a medium for narrative, dramatic, or playful activity, we should question the appropriateness of conventions derived from computer displays, teleoperations or training simulators …. Our motto was "no interface", expressing our desire to maximize naturalness, to enable the body to act directly in the world, and to minimize distraction and cognitive load [13].

Participants moved between the three locations through a series of active portals marked by the image of a spiral. As participants approached a portal, they could hear ambient noises generated by another of the spaces. When they entered the portal, they experienced ten seconds of darkness while still hearing the sounds from the space into which they would emerge. When they arrived at the space, the active area was defined by a "magic circle" approximately ten feet in diameter. While both the portals and the magic circles were to some extent required by the technical limitations of the medium (the size of the magic circles was determined by the range of the VR equipment), they offered participants an experience of journeying through the environments, guided in a loose way by ancient and psychically resonant images.

As Placeholder and Osmose demonstrate in nascent form, the hidden power of

virtual reality lies in it ability to help us feel ourselves in new ways. Laurel writes about Placeholder,

> Working on this piece has demonstrated to me that the art of designing in VR is really the art of creating spaces with qualities that call forth active imagination. The VR artist does not bathe the participant in content; she invites the participant to produce content by constructing meanings, to experience the pleasure of embodied imagination [13].

Virtual reality represents only one strategy in the quest for engaging an embodied experience in cyberspace. Its technological accoutrements—the headset, data gloves, and motion-tracking sensors—will soon be replaced by more sophisticated technological solutions. But whatever direction technology takes, VR as implemented by Davies and Laurel offers us an important example. By giving us a different interface, it shows us that the way we approach cyberspace matters. If we look at cyberspace through a window, we will see a world much like the early perspective painters saw through their mathematical grids—a world of objective, divided, geometric forms. If, however, we enter it through a doorway that enables us to bring all of our senses along, an entirely new experience emerges.

## 6. Paying attention

Our bodies, with their own particular points of view, imaginative abilities, and environmental surroundings, are the place wherein the divine spirit is revealed to us. Theologian Sally McFague, in her book *The Body of God,* suggests a powerful model for imaging this fundamental truth. McFague invites us to conceive of the universe as God's body. In this model, God is related to the universe as our own unique spirit is to our bodies. For McFague, spirit is the "breath of life". As McFague writes,

> Each of us, and each and every other part of the body as well, owes our existence, breath by breath as we inhale and exhale, to God. We "live and move and have our being" in God (Acts 17:28). Indeed we do. That is, perhaps, the most basic confession that can be made: I owe my existence at its most fundamental level—the gift of my next breath—to God. God is my creator and recreator, the One who gives and renews my life, moment by moment, at its most basic level. And so does everything else in creation also life, moment by moment, by the breath of God [14, p. 144].

McFague argues that God's transcendent nature makes itself felt in the world in a way that is both concrete and awesome. It is only through our embodied selves that we can experience some glimmer of divine transcendence. When we move past imagination into the realms of wonder, awe, and magnificence, that is when the divine reveals itself to us. Revelation is the visceral experience of being connected

to a larger, spirit-infused reality where the borders between self and other blur. In this context, the universe, God's body,

> … serves as a deep reflecting pool of divine magnificence and grandeur. To contemplate what we know of the universe, from the extraordinary ordinariness of a butterfly's wing to the ordinary extraordinariness of the Milky Way, is beyond all our capacities of imagination: the longer we reflect on either of these phenomena, the more filled with wonder we become [14, p. 154].

As McFague reminds us, it is not just the experience of the oneness of creation that causes us to marvel, but the realization that this oneness is composed of an infinite diversity of embodied forms. In this sense, the creation story that science tells us may be one of the most potent meditations on the divine we can contemplate. When we come to understand the incredible age, size, breadth, depth, and complexity of the natural world, coupled with the phenomenal ways in which human culture has woven itself through history, we stand in hushed awe before the divine, creative power that helped to render such a fantastic array.

For McFague, meditating upon the differences in the universe is one of the primary sacraments for engaging the sacred nature of God's body. She calls this "attention epistemology" [14, p. 49ff] and claims it as a central feature of sacred embodied wisdom. Embodied wisdom requires honoring our distinct and particular points of view without resorting to divisive individualism. Attention epistemology offers a way of claiming the distinctive embodiment of all aspects of creation while cleaving to the reality that we are all woven together with divine spirit. This is ultimately the lesson of positive asceticism-self-knowledge leads to a deep understanding that all selves have their own, unique perspective to contribute to the larger whole of creation. As Yahweh saw at the beginning of the universe, there were differences and they were good.

Attention to difference can both teach and transform. It teaches us that through paying close attention to the uniqueness of all of creation, through respecting and honoring diversity, we can find spiritual connection. Through attention, we engage both our differences and our connections. This experience can transform us into moral beings who act with care and respect toward our bodies and the world in all its divine diversity.

Cyberspace represents an utterly different, new, and unknown world for us. As we begin to learn how to engage it in richer and more multivalent ways, we will return to organic reality transformed. We will have new subjectivities, new experiences to incorporate. We will no longer be who we were. Our best hope for creating transformations that are spiritually evolutionary in nature will entail engaging an embodied wisdom that begins by paying attention at the deepest level to the whole of creation.

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**Jennifer Cobb** has worked for 15 years as a high-technology consultant, primarily in the area of public relations and marketing. Currently, she is Director of Corporate Communications at Luna Information Systems. She has worked with such diverse clients as Lotus Development, Hewlett–Packard, Sybase, and Oracle. She also served as the founding director of the Computerworld Smithsonian Awards Program. This program honors those companies or individuals who are using technology to benefit humanity. Jennifer lives in Berkeley, California, with her husband and two sons.