

HEALTHY BEHAVIOR: The Implications of a Holistic Paradigm of Thinking Through Bodymind Research

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"The results of scientific research very often force a change in the philosophical view of problems which extend far beyond the restricted domain of science itself."

-- Albert Einstein

"Never utter these words: 'I do not know this, therefore it is false.' One must study to know: Know to understand: Understand to judge."

-- Apothegm of Narada

I know that most men, including those at ease with problems of the greatest complexity, can seldom accept even the simplest and most obvious truth if it be such as would oblige them to admit the falsity of conclusions which they have delighted in explaining to colleagues, which they have proudly taught to others, and which they have woven, thread by thread, into the fabric of their lives."

-- Tolstoy

Abstract

The history of very significant advances in the human condition has been that of radical shifts in paradigm so long as records have been kept. Each worldview holds until it is long outgrown and then there begins a painful period of transition. As world knowledge and communication have increased exponentially, these paradigm shifts have occurred more frequently, taken less time, and have been correspondingly more painful for the species. (See Thomas Kuhn, 1962.)

We are presently in the midst of perhaps the most radical paradigm shift in the history of the race—the shift from seeing our universe as separate pieces to seeing it as an indivisible web of relationships. This is because this time it is about the basic nature of being human – humanity's capacity for health and its relationship to the rest of the cosmos.

The human being is vastly more than our western, mechanized paradigm has even imagined. It is even more than what eastern mystics have claimed. Biofeedback research, and paying attention to the documented, unexplained phenomena in both east and west, now leaves little doubt regarding this increasingly accepted statement.

Health Education can be the most significant profession involved with this paradigm shift. Who else but the health educator can facilitate the paradigm shift that we talk about in this article? How can the health educator influence the implementation of this inevitable shift in consciousness unless s/he gets there first (or at least early)?

In this article we explore this paradigm shift as it applies to healthy behavior by going beyond the framework of the old concept of health behavior. More specifically, we intend within this article to explore what modern neuroscience tells us about the factors that influence cognitive-biobehavioral processes. This process requires an understanding of brain research, which is developing an ever-increasing diversity of branches, and a recognition that the science of mind is truly multidisciplinary. The integration of the above, now termed psychoneuroimmunology further presents exciting options for provocative, rapidly expanding and innovative opportunities for health educators to advance practical solutions to many of our social/cognitive/biobehavioral health problems.

This process is already taking place in forward looking professional organizations. The American Holistic Nursing Association (AHNA) is an example of one national group that has a twenty year head start over the field of health education. Will we be up to the challenge of serving as the glue that holds together the health-care system of the 21st century? Or will we stand by while others take up the gauntlet?

Introduction

It seems not so long ago (1985) that one of the authors of this article and Robert D. Russell debated "Is Behavior Change An Acceptable Objective For Health Educators?". The debate, if held today, would most

certainly be focused on a transcendent step beyond into causation: "Is Behavior Determined on a 'Physical' or 'Mental' Basis, or a Combination of Both?"

It is only now that global communication and technological process have begun to bring east and west

together, while substantiating the unexplained observations from both east and west, that we are beginning to glimpse that "undiscovered country" and "the astonishing hypothesis" so well stated by the wise men of our age.

Just a glimpse of the wonders to come has been enough to vastly expand what we, as health educators, can do. It is as though we have been trying to do our jobs blindfolded and the blindfold has begun to slip ever so slightly.

The purpose of this paper is to encourage readers to open their eyes and peek past the blindfold to a wondrous new world of potential for helping those we can't help today. Even beyond that: we would help *ourselves* to be healthier and thus have more to offer those with whom we work (health educator heal thyself).

From our viewpoint health education needs to either take hold of body mind concepts, as they apply to health promotion, or other professions will take the lead. The American Holistic Nursing Association is a perfect example of a profession that already has a twenty-year head start.

It appears that the health education profession continues to focus on an outdated "theory" about motives of and influences on health behavior. We feel it is urgently necessary for health educators to explore a closer cooperation between the empirical findings of psychoneuroimmunology (the evidence that thought and emotion affect the immune system at cellular and subcellular levels), and the logical, analytical concepts and reasoning expressed in current holistic thinking as it applies to healthy behavior. We intend within this paper, in this charter issue of the *International Electronic Journal for Health Education*, to expand the old paradigm of health behavior into one suggested by these divergent mind sciences. This can only be done by exploring, and bringing together, a wide variety of disciplines to form a holistic concept of what the authors now choose to call healthy behavior.

We elect to promote the term "healthy behavior", to supplant the conventionally utilized term "health behavior", for several reasons: Health is a noun which – as defined by Webster – connotes a static definition. Healthy is defined as a state of *being* and, as such, is a dynamic and ever-changing state of bodymind – just as it must be in any individual. Few of us in the health education profession would have any argument with that. The profession of health education must become more dynamic. Calling our goal "healthy behavior" is one more step in the direction of this necessary development.

Today, these divergent disciplines are forming a science of the bodymind and "environment" (See Ferguson, 1980) that promises a major advance in our

understanding of behavior and mental phenomena. What is emerging from this confluent effort is a conception of the bodymind that has been called "the astonishing hypothesis" by Nobel laureate Francis Crick, co-discover of the DNA double helix. The identity of the bodymind connection to healthy behavior has been underlined for years; from Kenneth Pelletier's classical work *Mind as Healer, Mind as Slayer* (1977) to the provocative findings of current bodymind research.

Research and theory, as we explore them here, from such fields as psychoneuroimmunology, eastern and western philosophy, cognitive psychology, nutritional biochemistry, quantum physics, computer science, endocrinology, molecular/neurobiology – to name but a few – are converging to provide a vast new paradigm. The conclusions of bodymind research are truly being accepted as a physical (and non-physical) component of the natural world, subject to scientific laws, accessible to experimentation, and therefore open to understanding, prediction, and control. Bodymind concepts, in essence, are not the elusive, fuzzy – restricted to brain activity – entities we have considered them to be but rather an indivisible and interconnected (holographic) property of every cell. (See Joseph Chilton Pearce, 1992.) The brain is but a switchboard – albeit a powerful and complex one – of the bodymind gestaltic processes.

Besides that, there is now incontrovertible evidence that we do not end with our skin. This indivisible entity we call a human being physically, emotionally, socially and spiritually extends out to, and interacts with, the rest of the universe in ways not yet fully explored within the profession. (Dossey, 1990, and San Francisco Cardiology Study, 1988.)

As an example, in a 1994 report released by the Carnegie Corporation of New York, "Starting Points: Meeting the Needs of Young Children," which concluded that "how children function from the preschool years all the way through adolescence, and even adulthood, hinges in large part on their experience before the age of 3." (See Carnegie Council on Adolescent Development, 1994.)

What makes this fact important is that most recently, dramatic technological advances have produced sophisticated scanning equipment such as positron-emission tomography, or PET, scanning that allows researchers to get incredibly detailed images and insights about the brain's functioning. Using PET scans, researchers can watch a baby's brain continue to form long after birth.

Advanced brain research such as PET addresses the longstanding "nature vs. nurture" debate that posits either a genetically "done deal" or a "clean slate" at birth. We believe it is *both* and does not begin at birth.

What this and other bodymind research is showing is that we must not be confined by our present out-of-date beliefs inside and outside of our own field of health education. We must gain the emerging and transcending insights, now being illuminated by other scientific fields, to open our minds to a paradigm that will transform our currently one sided approach to the complex field of healthy behavior. Health education has essentially been static and resistant to change – a characteristic of all professions. Health educators still have an opportunity to expand their knowledge by being sensitive to the widely divergent issues involved in the current paradigm shift in healthy behavior.

Should anyone doubt the critical importance of the health educator, s/he has but to view Kenneth Pelletier's videotape (*Health and Your Whole Being*) to begin understanding the political/economic factors inhibiting the incorporation of this vital data into our system of health promotion. It can be argued that the health educator is the most important professional in this system since only public awareness and pressure can bypass these political and economic roadblocks. It is the health educator who is perfectly positioned to influence public opinion.

A *Journal of the American Medical Association* paper reported, more than ten years ago, that most all of the leading causes of death prior to the age of 65 are caused by personal behavior and can be prevented. All of the causal factors are lifestyle and all changes are learnable. (See Ken Pelletier's videotape.)

The monopoly given the allopathic paradigm, in 1911, has given the AMA more than 80 years to mold public opinion to consider medical-care and health promotion identical when in fact it is far from that. Medical/health-care, as it is practiced in this country, is disease-management, just as health insurance is really illness insurance and life insurance is death insurance. Calling what we do in this country "health-care" is but one way we keep our current medical monopoly in power. If it was working, we would not need to change it. Health promotion explores the many ways to healthy behavior. Who would be interested in buying "Death Insurance"?

Until health educators clearly see that distinction, they are part of the problem. The sections of this paper that discuss the medical model of health care are designed to lead the reader from the viewpoint of the fiction of medical/health-care to the fact of medical/disease-care. Only then can we rationally discuss healthy behavior.

The Possibility for Definitions?

The authors have chosen to define certain terms such as psychoneuroimmunology, holism and emotional intelligence for clarity only. Other terms such as health, bodymind have never been clearly defined precisely within our Western culture. As an example, there is not single word that can be used to link the body and mind together. The authors use the term bodymind, but this term cannot be found in any dictionary. What the authors do stress is that every human being *not* be considered as a composite of several levels, such as body, mind, spirit, but as a multidimensional unity.

One good opportunity for appreciating this fact can be this: often when the term health is defined it is reduced to some static, biological, physiological concept that has no correlate in the real world. It is entirely appropriate, here, to recommend to those who hunger for a "scientific" basis for a more useful definition of these necessary transformative concepts, to look at Boehm's videotape for insights into the indivisibility of all nature. (See video: *An Interview With David Boehm*.) Using Boehm's theory, in order to understand health, one must understand all the dimensions of life in the cosmos. (See Paul Tillich, *The Meaning of Health*, 1981.)

A comprehensive definition of "health" is impossible from the perspective of a purely Cartesian (Rene` Descartes) philosophy – the "Gold Standard" of western philosophy – whereas it is routinely defined from an empirical (from the holistic concept that the functional definition of all systems is that they are more than, and different from, any possible summation of their parts) viewpoint. Until we stop defining "health" in terms of circumstantial evidence, we will forever be held to the old paradigm. (See video: *The Meaning of Health with Bill Moyers*.)

Larry Dossey, MD, in his book *Beyond Illness: Discovering The Experience of Health* (1984) moves as close as we feel one can get to defining the term health by constructing a powerful case for the deeply causative role of the mind in health. His concept of health includes such thoughts as:

- o We can learn to participate in grief and pain from an utterly new perspective, a perspective that modifies the meaning we impart to experience.
- o Spirit is radically beyond health. No-Health is beyond body and mind.
- o People who attain it move beyond illness.
- o There is the most elegant ordinariness to persons who go beyond illness.

This is the "nothing special" quality of the world that is sensed by those who know it deepest. It is the stage where once again mountains become mountains and rivers become rivers. It is the awareness wherein suffering and illness becomes, once again, illness.

The Ken Pelletier tape reminds us that, as the present system of medical care exists: "We know a lot about disease. We know practically nothing about health." Is it any wonder that our system of "health care" is in trouble?

Ken Pelletier is one of the pioneers in the concept of consciousness being the basic factor of our western approach that has been excluded from the equation. When consciousness is factored in, suddenly all observed phenomena of healing and health promotion are explainable. (See video *Health and Your Whole Being*.)

The problem lies in the fact that in all too many instances, our modern view of healthy behavior has outgrown the expressions we habitually use – outdated words, concepts and beliefs which were created long ago to convey Cartesian (Descartes' basis for our reductionistic/mechanistic western paradigm) beliefs. We must grow beyond the concept of health being static. We must open ourselves to the dynamically changing definition that acknowledges the implications of a new holistic paradigm of thinking through bodymind research – all leading to a more holistic understanding of healthy behavioral response. Part of the problem is that these antiquated words, concepts and beliefs about the bodymind connection are major factors holding back the field of healthy behavior. (See video: *Recovering The Soul: A Scientific and Spiritual Search*—by Dossey)

Psychoneuroimmunology offers us many exciting insights into not only the roots of how healthy behavior is materially influenced by bodymind, but also the factors that influence bodymind functioning. It is this process that opens into the details of the effects of those necessary changes in consciousness.

Mathematician Charles Muses proclaimed about the future direction of our discussion: "The potentials of consciousness remain well nigh the last reachable domain for man not yet explored – The Undiscovered Country." The authors suggest this statement is properly followed up by French neurologist Frederic Tilney's prediction that we will "by conscious command evolve cerebral centers which will permit us to use powers that we now are not even capable of imagining." One of the authors of this paper had, for many years, used as the postmark on his postage meter: "You Are More Than You Think!" The technology of the west (biofeedback) has already brought us a long way toward realizing Tilney's prediction.

Biofeedback research has also finally laid to rest our narrow western viewpoint that used to reject, out of

hand, the now reproducible observations of cognitive control of physiological systems common in eastern philosophical traditions.

The Revolution

From the classic nineteenth-century case study of Phineas Gage, the railroad worker whose frontal lobe was pierced by a metal rod, to the enchanting glimpses of brain functioning expanded by modern positron emission tomography and neuromagnetometry – among other newly developed systems of mind function analysis – mind research has provided increasingly remarkable insights into the mysteries of behavior and mental phenomena. Gage showed behavioral and personality changes which may have been mysterious and unexpected in 1848 but today are recognized as the typical results of damage to the frontal lobe. His and similar case studies initiated the development of new research into the physical representation of personality and emotions in the bodymind which is only now reaching fruition. (See Daniel Goleman, Chapter 11, "Mind and Medicine," in *Emotional Intelligence*.) The concept of "emotional intelligence", as Goleman uses it, includes the abilities to rein in emotional impulses, to read another's innermost feelings, to handle relationships smoothly and to motivate oneself. "These are the capabilities that are going to determine our success in family life, in careers, with friends, as citizens," he says. "These are the abilities that make us people." The foundations of healthy behavior most certainly require these positive attributes.

In an analogous fashion, Norman Cousins' work has been grossly simplified. His "Anatomy of an Illness (as Perceived by the Patient)," first published in the *New England Journal of Medicine* (1982), and his statements and thoughts concerning the complex relationship between mental attitude and physical health have been reduced in some quarters to the apparently absurd notion that laughter can cure cancer.

Cousins used laughter as a metaphor for the full range of the positive emotions, including hope, love, faith, a strong will to live, determination and purpose.

What we are discussing here is a vital additional step toward the health promotion for the 21st century. Up to now, we have followed the conventional medical penchant for ignoring the observed and documented happenings in the world of "anecdotal health behavior". However, we cannot afford to continue doing that when the bases or the validity of these "happenings" have already been well established by fields outside health education. Thus, the most common way we have protected ourselves from changing our paradigm has been for us to just ignore those happenings we could not explain with our old Cartesian philosophy. A wise man once said: "The appearance of one sparrow proves the

existence of birds." Research, in the current age, has tended to throw out the anomalous findings in favor of the "mean". It is time to be brave enough to look at *all* the evidence and not just what is considered "convenient". (See Stoll, Grossinger and Coulter)

The 1990s are already being viewed as the decade of behavioral medicine and the bodymind connection. In an introduction to the 9th International Conference "The Psychology of Health, Immunity and Disease," sponsored by The National Institute for the Clinical Application of Behavioral Medicine, it was stated that:

Today, in America and throughout the world, we are witnessing a cultural transformation in health care. This change is emerging at a time when mind/body therapies and approaches to healing are clearly taking shape. As practitioners, we have achieved a new level of credibility among the conventional medical community by demonstrating behavioral medicine as a viable healing methodology that can not only control costs, but increase overall quality of life.

It can be said that more has been learned about the science of the bodymind in the last fifteen years than in all the previous years of research. Although these newly discovered (by our western scientific method) mechanisms and interactions have been applied empirically for the last ten thousand years, it has only been recently that bodymind has been included in this scientific research as a holistic entity. The most important qualification for the proposal of any new theory of "reality" is that it explain *all* of the observable phenomena. The ideas presented in this paper, so far, describe the only theory that meets that criterion: *everything* in the cosmos is connected holographically.

Moreover, modern researchers are not restricted to case studies. In addition, they are using technically advanced methods that can even probe individual brain cells or map neural circuits in a project similar to the Human Genome Project (the mapping of the "addresses" of each gene on all forty-six human chromosomes). The present goal is to construct a detailed map of the human brain, chart its intricate webbing of cells, and identify the corresponding mental, cognitive, emotional, and biobehavioral experience. However, these studies only involve the brain which we now know may be but a major *part* of the total bodymind interactions of healthy behavior. Already, psychoneuroimmunologists have pieced together an impressive (albeit still incomplete) understanding of bodymind anatomy and functioning and, in the process, have stimulated widespread collateral

research and speculation in related fields. Biofeedback research quickly established that one could learn (in a few hours) to consciously control one single muscle (or nerve) cell.

Cognitive psychologists have developed new technologies for research and, consequently, have made cognitive psychology an integral component of the new bodymind science. These and related efforts remind us that bodymind research is developing an ever-increasing diversity of branches and that the new science of bodymind is truly multidisciplinary. This most certainly includes health education – which, undoubtedly, *can* be the most important single cog in the wheel of the health-promotion system to come.

Our professional need for this new science, as we enter the 21st century, is of crucial importance to health educators, especially in professional preparation and most certainly in programs promoting healthy behavior. This potential – together with the fact that study of bodymind issues is so fascinating – probably accounts for the attention that the new bodymind science has received from the popular media.

Ways to Facilitate the Psychosocial Approaches to Health Education

Most people find it hard to work on their health from a psychosocial approach alone. All health educators have had personal experience with that fact. Frequently, simply improving the quality of the function of the physical bodymind (nutrition, exercise and skilled relaxation [Davis]) – the three basic approaches recommended by all holistic health practitioners -- brings a more energetic individual to the professional suggesting healthy behavioral changes. (See video: Andrew Weil, MD., *8 Weeks to Optimal Health*.) *We health professionals know, from our personal experiences, that most people start their learning (healing) journey exhausted, depressed and sick and that we wish that we had seen the person sooner in her/his slide into illness.* One of the ways to bring them back toward this more energetic level of function, where our psychosocial skills in health education will be so much more effective, is to consider the Orthomolecular Psychiatric Association's discoveries over the past forty years.

We suggest that people radically changing their nutritional habits for a 2-4 week trial period, while observing the effect on their well-being, is an often more efficient and effective alternative to a purely psychosocial health education approach. Of course, the recommendations for this change need to be based on the personal knowledge of the health educator doing the evaluation. *We say trial since the science of nutrition is*

still too complex for anyone to be sure of choosing the perfect diet for that person the first time. There are some basic rules for anyone although the quickest, and most dramatic, changes are individually determined. (Stoll) Even the regular practice of any effective approach to skilled relaxation or aerobic exercise – or better yet, the combination of them together, will eventually produce similar results in a few months. (Note: The concept of stress management includes skilled relaxation techniques (Davis), strategies for engagement and involvement, as well as mechanisms for increased "internal locus of control."—Mind, Body, Health, pp 473-484). Who among us can say that we can reach similar effects in the average person we counsel – when we use psychosocial methods alone? (See Reed, 1983, and Schauss, 1980.)

When the nutritional approach is used alone, the results are more predictable and within two weeks the individual would experience sufficient benefits that they would want to continue it indefinitely. With the nutritional approach, done correctly, results seem to happen much faster than with any other single modality. Besides, as the individual experiences more and more energy, they become more and more interested in more healthy behaviors: "If I can feel this much better, this soon, by just doing this, what could I feel like by doing more?" (See Reed, 1983.)

Personally observing this one eye-opener, alone, creates many professional converts who become truly committed to looking at the problems of health education through a much wider lens. Of course the health educator personally experiencing these changes is an even more effective way.

The following table reports data that has been well established for twenty years. We offer it as one example of the difficulty of changing one's paradigm of reality. Nearly all professionals in the field of health promotion were educated without being privy to this information. Why? Is it really true that only high tech, and very expensive, therapeutic approaches are taught? Besides, a medical license is not required to share these approaches with the public. They do not even require testing of any kind. All that is needed is that the information be available to the caring parents and concerned child. As such, this information is seen by the medical professionals in charge of the "system", as competition. This is opposed to what we have experienced in our practices: which is that they are complementary to the current allopathic monopoly.

The fact that this twenty-year-old knowledge is not commonly applied testifies to the difficulty of shifting our approaches to dealing with these difficult problems. Perhaps the reader has noted that most of our references

are ten to twenty years old. This is not new stuff. It is just that it takes a generation for radical new discoveries to become part of the common consciousness. We have had our generation. It is now past time to move forward.

For more than twenty years it has been known that various very simple changes in diet create dramatic improvements in bodymind function in a short period of time – this without any evaluation at all. (See Table 1.) The reluctance of the medical profession to make these simple, safe and inexpensive approaches at least part of the "treatment of choice" is based primarily upon economics and the fear by the professional of being ostracized by her/his colleagues. The only protection the public has, against this non-health related delay in "what is best for the person", is to become knowledgeable in the area which concerns their own particular problems and so become a more active participant in their own health promotion (internal locus of control). Who would be better than the health educator to facilitate this process in any individual?

Transpersonal Psychology: A Vehicle for Change

Joan Borysenko, PhD, is one who understands the new paradigm and practices it in her profession. Her tapes graphically describe and explain its powerful and practical application to change to healthy behavior, *receptivity to health education* and the individual empowerment produced by these freeing concepts. These ideas make it much more practical for the individual to firmly establish an "internal locus of control" (Mind, Body, Health pp 473-484) – an essential first step toward healthy behavioral change.

Gerald Jonas, in his book *Visceral Learning: Toward a Science of Self-Control* (1972) discusses human behavior and individual control in this way: "Our personal experience, supported by a cultural heritage of several millennia, assures us that somewhere inside the person seen by others there is an invisible core of being – a purely private self that observes, if it cannot always control, our public actions and is ultimately free of all controls imposed on the organism from outside. Whether it makes any sense or not, that is what it *feels* like to be conscious, and any definition of 'conscious control' that fails to mention such a feeling is like a weather report that fails to mention whether it is raining or sunny."

The question of which must come first in behavior change – the individual or the society – is neatly laid to rest by Dr. Borysenko's facility with the genre: "Inner transformation *does* change the world."

She tells the story of her friend, Peter Russel's (author of "A White Hole in Space") answering machine message: "This is not an answering machine. It is a

questioning machine. Who are you? What do you want?"

The fact is that the vast majority of us, of the western Cartesian philosophy, come into this life and finally leave it without ever answering either of those questions. Is it any wonder that we are inundated with chronic dis-eases?! (Borysenko video.)

It is the function of health education to be the opening wedge into resolving this unhealthy societal condition. How can we, as health educators, be more than a part of the problem until we, personally, can make the transcendent leap into a more holistic paradigm of health?

The Problem of Transcendence

This "problem" is probably due to the fact that our Western culture has had more than 200 years to become fixed in the concrete of a Cartesian (rationalistic) paradigm of reality as being the *only* valid approach to health promotion. This "seeing the trees and not the forest" kind of reductionism is a powerful philosophy for dealing with many things – *just not everything*. For thousands of years, before this modern era of reductionism, the holistic paradigm was the only practical way we *had* to approach complex health problems: "Seeing the forest and not the trees".

One of the basic arguments, at the time of the acceptance of the Flexner Report by the US congress (1911) – thus ushering in the present allopathic monopoly over health-care thinking in this century – was that empirical thinking methods of research and application were too difficult and could not yet be proven in the laboratories of the time.

William James, MD, who has been called the father of American psychology, tried to stop the stampede by the national legislature toward accepting this report that promised a much simpler way to approach medicine. He suggested that we still didn't know everything and there was a real possibility that we could be shutting off the very research most needed to improve our concepts of effective health-care. The law that passed (based completely on the Flexner Report – sponsored by the AMA of the time) refused any government money for research in any field other than allopathy. From that grew our present disease-care crisis. This was the most recent "victory" of Rationalism over Empiricism. Now, of course, we are proving those empirical concepts every day in our advanced laboratories – and still barely scratching the surface. The acceptance of the Flexner Report just put off by more than 80 years this essential research effort. (Grossinger and Coulter.)

Reductionistic (rationalistic) thinking *was* (and is) easier but has proven to be of insufficient scope to cope with the chronic diseases of civilization – all of which are

multi-factorial in causation. The current disease-care crisis can be directly attributed to our desperately clinging to the idea that, if we just threw enough money into it, *we could force the health-care camel through the eye of the allopathic needle*.

All of the non-allopathic systems of health-care, practiced over the entire world today, are based on empiricism. The allopathic philosophy, based on rationalism alone, has not the depth to deal with the chronic illnesses of civilization—empiricism does. By combining rationalistic thinking (for acute care) with empirical thinking (for chronic conditions) we have a blueprint for the health care of the 21st century. That involves, however, our willingness to transcend the current narrow views of reality *and* to create a level playing field (at least so far as insurance coverage and licensing laws are concerned), in this country, for all major global approaches to health promotion. There are citizens' committees, who understand what is needed, functioning in 30 states already. Any of them could be contacted by anyone wanting to understand the problem – or even join into lobbying for change. Until health educators make this leap of transcendent thinking, how can we expect the public to do so? A wise man once said: "If you always do what you have always done, you will always get what you have always gotten." (Source Unknown) If you are not part of the solution, you are a part of the problem. A definition of "insanity": Doing the same thing over and over while expecting different results.

Recall the half century of acrimonious controversy in the field of physics during which half of the world's top physicists insisted light behaved as a wave and half insisted that it behaved as a particle. Each side could set up experiments that would prove their theory was correct. It was only when they finally came to the realization that light behaved *both* as a particle *and* a wave that they could progress to the modern quantum physics theory – the logjam was broken.

The method of this seemingly paradoxical conclusion in physics can be directly applied to the fact that rationalism and empiricism are both "correct". We will not progress in health promotion until that 4000 year old "Divided Legacy" is resolved. (Coulter.)

There is already far more than enough scientific data upon which to base a firm paradigm of everything being holographically related. The effectiveness of auricular acupuncture, reflexology and iridology as well as the functional reality of the holographic brain (Karl Pribram) are but a few examples within the human alone. Healing by prayer at a distance (San Francisco Cardiology Study as but one of many such studies) takes us beyond the human structure into the cosmos. The only understandable reason for the reticence by professional

health educators, for not accepting this impressive array of new scientific ideas into an ingenious and optimistic portrait of healthy behavior for the 21st century, is a

reluctance on the part of health educators to give up cherished paradigms which have served us all so well for so long (See Tolstoy quote above). Why do you think there is a disease-care *crisis* worldwide today?

Table 1: Effects of Treatment on Children's Behavior

Treatment Option	Percentage Improved	Percentage Worsened
Removing Milk	32.0	1.0
Removing Wheat	50.0	2.0
Removing Sugar	51.0	3.0
Psychotherapy	9.0	1.0
Patterning	38.0	3.0
Exercise	44.0	7.0
Day School	6.0	3.0
Residential School	31.0	4.0
Operant Conditioning	20.0	5.0
All Drugs Combined	1.6	1.0
Mellaril (Best Drug)	12.0	5.0
Vitamins	45.0	1.5

Source: Stoll, Walt., MD. *Saving Yourself from the Disease-Care Crisis*. Panama City, Fla.: Sunrise Health Coach, Box No. 12091, 1996; as taken from Rimland, Bernard; "Comparative Effects of Treatment on Child's Behavior (Drugs, Therapies, Schooling, and Several Non-Treatment Events)." Publication #34, Institute for Child Behavior Research, San Diego, California 92116, June 1977.

In her book *Neurophilosophy* (1986), philosopher Patricia Smith Churchland proposes the sensible idea that a satisfactory understanding of bodymind and behavior would be much facilitated by – and perhaps even requires – a closer cooperation between the empirical findings of neurophilosophy *and* the logical, analytical concepts and reasoning of traditional philosophies. It would behoove brain researchers to become familiar with philosophy, Churchland argues. She also suggests that philosophers could ground their propositions more firmly in scientific

research. A hallmark of our age is that modern scientific discoveries are substantiating traditional philosophies. And, we can add here, it would also behoove health educators to become more familiar with both.

The firefighter climbing the ladder must let go of the current rung in order to reach for the next one. We are fortunate in our profession that we at least can bring the old rung along with us. All we have to admit to ourselves is that there is more than one rung on the ladder! Both/and is another hallmark of our era.

Where In The Body Is The "House of The Mind"?

The title for this section came from one author's memory of an ancient similarity of mystical knowing represented by the well known idea of "The Cave of Brahmin". This 4th ventricle of the brain was known by many ancient disciplines to be the "house of God" where everything seemed to center. Our most competent technology is just now proving that their ancient, vitalistic (empirical) knowing was correct without resorting to "science". The only difference is that now we are advanced enough to recognize that the Cave of Brahmin is but the clearing house for the mind of the *rest* of the body. (See video: Brugh Joy, *Healing and the Unconscious*.)

Perhaps the most far-reaching blank spot in the thinking of many professionals in the field of healthy behavior is the persistent idea that our emotions, as well as certain properties of our minds such as *will, feelings* and *attitudes*, are qualities which are wholly explained by brain operations. A common idea in the ancient world was that mind and emotions emanated from the heart, not the head. Even today, we commonly see references to this notion in such phrases as "I have this gut feeling," or "My heart tells me." We now know that heart muscle creates the same endorphins manufactured by the brain. The white blood cells have receptors for the endorphins made in the brain. The intestinal lining also makes the endorphins which were originally considered the unique province of the brain.

Unfortunately, a similar error has persisted in the field of healthy behavior, and in which wants and feelings as related to health issues are treated as if they exist in a separate, transcendent reality that can magically interact with brain neurochemistry. "Wants" and "feelings" are *not* pure and simple brain processes but are influenced by the same forces that intermingle with other brain processes – namely, the internal biochemical/electromagnetic environment of the rest of the body – as well as experiences from the external world.

It is very disconcerting to hear experts speak of, and textbooks bind themselves to, a very narrow and disjointed approach to such a complex field as healthy behavior. In this vein it is disquieting to note that the *American Journal of Health Behavior*, in its wonderfully stated objectives, suggests a holistic and comprehensive view but instead only publishes papers that persist in expanding an unconnected, one-sided view of body and mind. The same can be said of *Health Behavior and Health Education* (1997) in which the focus is one dimensional by totally ignoring the influence of bodymind

possibilities that truly matter in terms of healthy behavior. We attribute this "narrow" focus to either an unwillingness on the part of the editors (and thus acceded by the writers) to publish research/ideas discussing these transcendent subjects, or a lack of understanding and/or acceptance of these ideas. It is our contention that the evolution of bodymind research will *soon* lead to a new kind of healthy behavior and health education thinking *only* if it is so viewed by a wide segment of the members of the health education profession; although it will eventually happen without us if we don't participate.

There will be a new kind of thinking for the 21st century which includes the fact that everything interacts with, and is wholly influenced by, everything else – no exclusions. (See George Leonard, *The Silent Pulse*, 1978.) This concept seems difficult only until the individual achieves the transcendence of perspective always necessary before a paradigm shift is possible – then, suddenly, it is easy. And so it is with the term "holistic." Breaking with our promise that we will not define specific terms, let us take liberties by doing so again. For the benefits of understanding, the term holistic refers to the fact that any functioning system of parts creates something *in addition to, and separate from*, any possible summation of the parts. All of the body is in the mind, and all of the mind is in the body. (See videos: *An Interview with David Boehm*, also the San Francisco Cardiology study of the effects of distant prayer—*Recovering the Soul* with Larry Dossey, MD.)

The single most important ingredient for healthy behavioral change is the individual's desire to change. Toward that end, developing an "internal locus of control" (See *Mind, Body Health*, pp 473-484) is the first, and absolutely essential, step toward the effectiveness of any approach to health education. One of the aims of this paper is to bring to the total equation of behavioral change the holistic procedures that would improve the quality of the *tissue* (the entire body) making the decisions and implementing the lifestyle changes needed. *Attitudes, personalities, healthy behavior, even the mind itself – all are produced by bodymind processes and should not be viewed as somehow separate or apart from them. Healthy/unhealthy behaviors are bodymind processes, pure and simple, and are influenced by the same forces that influence other bodymind processes – namely, the biochemical/electromagnetic environment and experiences from the internal and external world.* It is therefore disconcerting to hear health educators talk about social change as if it were some mystical essence to be imposed on the mind from *without*. The fact is that healthy behavior and the mind are not all produced by brain processes and must be seen as encompassing the holographic bodymind/environment.

To The Point

"Mind" truly matters when it comes to healthy behavior. It is our contention that health education continues to assume that mind is truly not a part of the body, and thus is treated as a sort of side dish to the main meal. As an example of the indivisibility of mind from the environment, we offer Table 2 below.

In 1980, William Philpott, MD published his landmark book *Brain Allergies*, which is still a classic in the field. Many substances from the environment can influence brain chemistry.

So too, are healthy behaviors conceived as states produced by, but not a part of, the bodymind. Thus we in health education conceive of healthy behaviors as some of the most elusive and nebulous concepts separate from the physicalness of the bodymind. This concept is gradually being debunked by the new bodymind research. It makes sense within the field of health education to look seriously and closely at a bodymind paradigm for the healthy behaviors needed to go beyond our present crisis in health-care. Doing that will require significant changes in our popular ideas.

Toward a Healthy Behavior Paradigm

Modern neuroscience has offered us many exciting insights into the mechanics of how mental states, emotions, and healthy behavior are produced by the mind, as well as what factors influence mind functioning and the details of such psychological processes. It is not helpful or useful, therefore, to pass over bodymind research vis-

a-vis professional journals, conferences, text books, etc., without serious consideration and thought. We need to learn to rely more heavily on clear, sound, scientific understandings and interpretations from many fields of endeavor which are presently considered outside our own profession. More constructive patterns of healthy behavior; enhancement of emotional sensitivity; greater control of one's life: These are the primary and secondary outcomes of all effective health education. Far from being vague or elusive, these outcomes have been shown by the overwhelming weight of empiricalevidence to be as objectively verifiable as they are personally meaningful. The individual's development of new and more constructive patterns of healthy behavior is reflected in his or her ability to reach previously unattainable goals.

Effective health education and healthy behavioral change, then, result in meaningful and measurable outcomes.

The Role of Health Education

Health education has published accounts of this mindbody science which has appeared in numerous professional journals. At the same time these academic endeavors are often reported to the general public via the popular media: television, magazines, newspapers, best seller list, etc. – often as quasi "new age". Herein lies what we perceive as another major problem. While new bodymind science is receiving more popular attention than any other academic

Table 2. Nervous System Manifestations of Allergy-causing Substances

Changes	Percentage of Effect				
	Food	Pollens & Dust	Mold	Bacteria	Drugs & Misc
Mood Changes	84	33	28	20	24
Minimal Brain Dysfunction	45	23	0	0	32
Mental & Neurological Syndrome	89	35	3	16	22

M.B. Campbell. Neurologic Manifestations of Allergic Disease. *Annals of Allergy*, 31 (10):489. October 1973. Reprinted by permission of Robert Anderson, MD (Anderson)

research, it would appear that the majority of the profession itself remains skeptical. Even when addressed in journals and/or professional conferences; holistic, bodymind, spirituality issues are treated as an addition – as parts rather than whole. The real reason for, and thesis of, this article is the magnificent open-ended possibility of how our concept of healthy behavior is predicated by the magnificent open-ended possibilities our higher structures of bodymind offer for changing behavior. Since professionals are usually the last to make transformative leaps within their own professions, it is imperative that the readers of this paper understand that it is *more difficult* for them than it is for the lay person to understand and accept new truths. (See Tolstoy quote above.)

Professionals frequently excuse their personal reluctance to change their paradigm by choosing instead to believe it is only media exploitation; which more often than not reflects and interprets these scientific ideas through a lens clouded by erroneous assumptions. By blaming the media's frequent pandering to a "natural" quick fix about mind and behavior, professionals can avoid the painful process of taking seriously the true meaning and implications of the intellectual revolution we are now experiencing.

This attitude is not shared by all, though. Blair Justice, who is a professor of psychology in the School of Public Health at the University of Texas at Houston, addresses this revolution in his book *Who Gets Sick: Thinking and Health*:

No one factor determines who gets sick and who does not. Whether we are talking about heart attacks, cancer or AIDS, "cofactors" – not single causes – are responsible. And a key cofactor, now intensely researched as part of the new science of biological and molecular psychology, is the cognitive – how our heads affect our health.

Since it is now known that the brain has power to regulate all bodily functions, dysregulation of the central nervous system is increasingly being implicated as a contributing factor in disease. What goes on in our heads, then, has far-reaching influence on not only our nervous system but also the immune system, the hormone system and our health.

Most health professionals . . . concede that the mind has something to do with physical illness, but few know how the two affect each other or what the evidence is that they are related. Even fewer can keep up with the mushrooming research, from the molecular to the behavioral effect of the brain on the body.

The growing field of psycho-neuroimmunology is based on a system that examines the ways in which psychological processes are intertwined with both the nervous and immune system.

The Wave to Come

If we in health education do not take a leadership role in the coming paradigm, we believe the profession will be swept along in these changes by other professional fields within the health care field. Holistic nursing (AHNA) is a good example of a profession doing an outstanding and imaginative job already.

One of the major changes that must take place within health education, in order to take a leadership role, is the transcendent commitment to do what is best for the individual and society and not, primarily, what is best for the profession. The best example of the antithesis of this attitude lies in what the AMA is doing right now to protect its monopoly.

As Fred Polak has so eloquently pointed out in his *Images of the Future*, if we are to survive we must begin to invent viable images and discover the best ways to utilize them.

There are grave difficulties involved in talking about paradigm shifts for they often take on a life force of their own and are always a threat to the status quo. Health education needs to move decisively into a growing consciousness that healthy behavior (and health promotion) requires a form of ecological, bodymind and holistic thinking that up till now has been sorely missing.

What can be done to help the 21st century become the century of the integration of the bodymind into a comprehensive approach to healthy behavior? Remember, this is going to happen with or without us. This is our opportunity to have some influence on the direction it will go. We can start by reversing all of the negatives we have stated above and focusing on:

- o Totally integrating bodymind thinking and research into all aspects of health education, and including:
 - professional journals
 - professional conferences
 - professional programs in healthy behavior

A Program in Healthy Behavior

It is the authors' contention that a graduate career devoted to purely intellectual development is no longer an adequate preparation for becoming a Health Educator who is focusing on the area of healthy behavior. The core of our suggested program is an experientially *balanced* development of the individual – the integration of the physical, intellectual, spiritual and bodymind aspects of the personality. Our goal is to explore and experience behavior in an environment that provides opportunities for intensive personal growth and integration of one's own bodymind self.

Five areas of study are emphasized. Each area involves intensive personal participation, academic study, and an emphasis on professional training related to counseling, teaching, and research. Tools for communication will be taught in each area.

1. Bodymind Work

Students are expected to develop competence sufficient to teach an introductory course in Healthy Behavior or to practice professionally in any number of health education settings. Some bodymind disciplines may include: breathing, T'ai-Chi, Aikido, Bioenergetics, among many others.

Academic study would include work in anatomy, physiology, psychology, philosophy, clinical holistic nutrition (*not* Dietetics), health promotion, stress management, behavioral health and bodymind course work. Basic information would include personal familiarity with centering, stress reduction and movement techniques. Stress would be placed on new ways of integrating bodymind experience and health education, with a focus on techniques for maintaining, improving health and preventing illness among people who are currently healthy (See Matarazzo, 1980, Matarazzo, et al, 1984).

2. Group Work

Extensive use of group techniques will allow students to work on communication skills and to develop a transpersonal orientation to group work, facilitating what Jon Kabat-Zinn calls "heightened awareness." Instead of competition and grade-orientation we strongly emphasize the building of a sense of shared goals and developing a supportive group community within the program. Specific systems would include: Rogerian group work, problem-oriented group work, gestalt therapy and the like.

3. Individual Work

Exposure to various techniques and systems of healthy behavior and health education will be available,

in a clinical setting, in order to facilitate personal development and clarification of individual goals, as well as professional training.

4. Intellectual Work

At the core of the academic program is an in-depth study of a single system of philosophy, or research in healthy behavior, chosen by each student. Students read and research what they are most interested in, teach each other what they have learned, and evaluate each other's work.

5. Spiritual Work

Emphasis is placed on a personal commitment to a specific path which will help to actualize each student's individual goals. We would stress integration of one's spiritual discipline and perspective in daily life. Emphasis would be on such works as Herbert Benson's book *Timeless Healing* (1996), and Larry Dossey's *Healing Words: The Power of Prayer and the Practice of Medicine* (1993).

Synthesis

To a certain extent the general acceptance of an approach to healthy behavior has been the result of shifting public/professional perceptions of traditional medicine and the conventional medical establishment. Certainly in the past two decades there has been growing interest in traditional forms of intervention (as contrasted with conventional forms), with a resulting burgeoning of approaches to and kinds of health care. The problem within health education is that the notion of a lived condition of healthy behavior gets lost. Instead, an opposition is set up between the process of realizing a potential and a static concept of "health" behavior. Until healthy behavior is seen as a personal possession for which the individual must take responsibility (internal locus of control), health education will forever live in the mold of "conventional medicine."

We would like to conclude by raising some questions one of the authors of this article brought up in his book *Health Education: A Cognitive/Behavioral Approach* (1997). We hope the reader will think about and discuss these questions in their classes on healthy behavior:

- o Must we choose between a scientific and an unscientific definition of health, or can the two coexist?
- o How are mind and body connected? Is mind part of soul, and if so, can it exist apart from the body?
- o How do we know how healthy we are? Are our perceptions built into our minds, or do we develop them from our external perceptions and experiences?

- o How does perception work? Are our impressions of health and illness true representations of what we are? How can someone know whether or not s/he is healthy?
- o Which is the right road to true health: pure knowledge from the outside, data gathered from the inside, or a combination of both?
- o Does the mind rule the body, or vice versa? Or, do they play an equal role?
- o Can we present not only the analytical and logical but also the intuitive in health education?

The author's would like to add one more question: "What is the true potential of the human construct?" Remember what the wise man said: "The appearance of one sparrow proves the existence of birds."

We hope that we have answered some of these questions. Others need to be explored more closely in the field of healthy behavior. *We intended this article to create an opportunity for the health educator to see what is coming in time to participate in the direction it will go.* Since everybody knows more than anybody, we hope this will serve as an opening for more fruitful discussion.

The improvement in both *personal* health and human relations, that we argue for in this article is an understanding of healthy behavior through a bodymind awareness of its behavioral consequences.

We really love a quote by Ram Dass, in an article entitled *De-Crystallizing the New Age* by David Spangler: "I think there is a paradigm shift going on in our civilization. It's a slow, big, deep, rhythmic, oceanic process. I think it's very delicious, and I want to encourage it. But I don't want to label it, because I think any label is reductionistic. The problem with calling something "New Age" is that it polarizes you from the old age. I'm not a revolutionary; I'm much more of an evolutionist. I find the word "new" partly exciting, like the good news in Christianity, but also partly offensive, because it's not new at all; it's just a remembering of what we have collectively forgotten."

An Invitation:

To those of you who would like to pursue with us the potential of healthy behavior through participation in a conference we offer you our email addresses: **Don Read**, DREADSWIM@AOL.COM and **Walt Stoll**, WALTSTOLL@JUNO.COM

What we are most inviting are those of you who have positive suggestions and offers for change in the promotion of healthy behavior.

For those who want to enter into a dialogue we suggest doing it through the HEDIR.

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Don Read is a Professor in Community Health within the Department of Health Science at Worcester State College. His latest book *Health Education: A Cognitive/Behavioral Approach*, explores the ideas and philosophy presented, with a focus on the observations as a paradigm shift for health education. The authors feel that this article will ultimately move towards a book which explores some very fundamental issues about the human mind and our development in the field of healthy behavior.

Walt Stoll, MD, has practiced medicine as a Board Certified Family Practitioner for 30 years. As a founding member of the American Holistic Medical Association, he is a recognized pioneer in holistic medicine in this country. In the last seventeen years of his practice he combined more than fifteen of the world's healing

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philosophies by working with a team of professionals in his office, *with* his conventional medical training, to find that they were all complementary to that practice. Walt now spends his time speaking, writing and spreading the word, internationally, on his interactive website: <http://bcn.net/~stoll> His latest book *Saving Yourself from the Disease-Care Crisis*, explores a number of personal holistic solutions for some of America's common, chronic health problems. The social/economic/political obstructions to those solutions are also discussed for those readers who ask the obvious question: "Why didn't *my* doctor tell me that?"