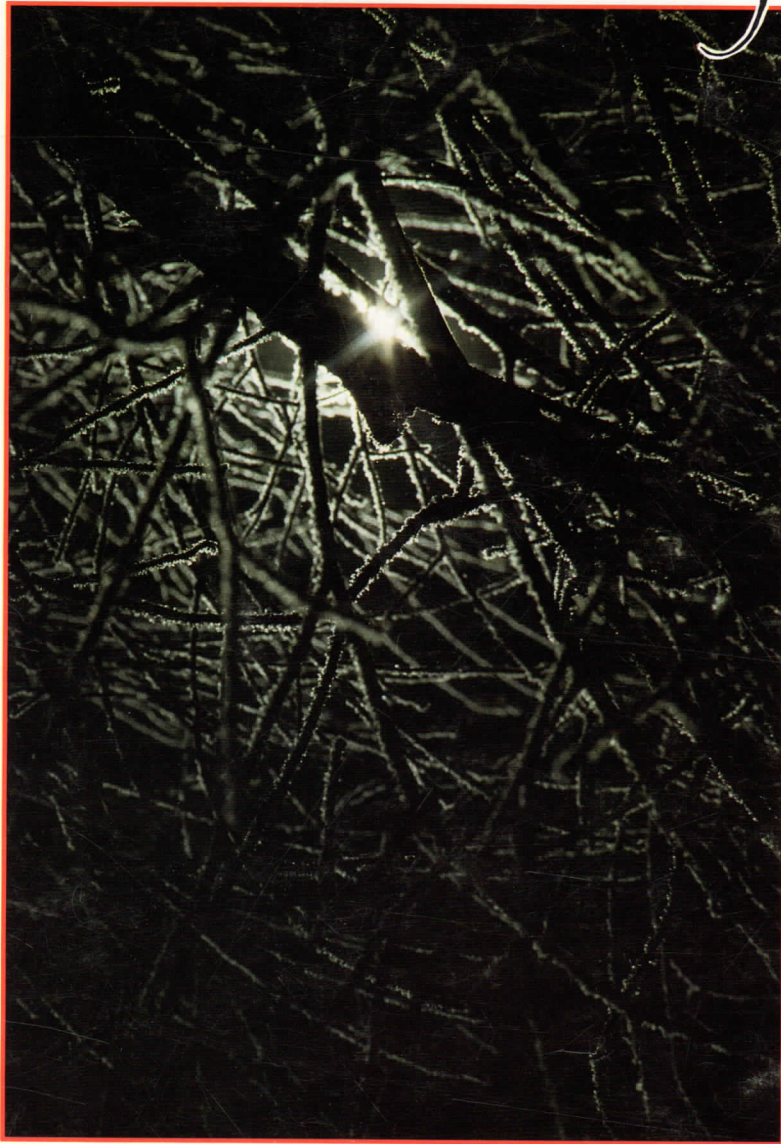


R. BUCKMINSTER FULLER  
BARBARA MARX HUBBARD  
JOHN DENVER  
JAY HAIR  
CARRIE CLICK

BOB SAMPLES  
JON McBRIDE  
AND MORE

# Windstar journal



SYNERGY

SPRING 1989

FIVE DOLLARS



# welcome to the windstar journal

*Synergy. It is an unusual word, made familiar to many by the teachings and writings of R. Buckminster Fuller. For those in whom the word strikes a familiar note, it tends to evoke a sense of excitement. It is a word inherently abundant with energy, a word for all seasons—and somehow perfectly appropriate for this springtime issue of the Windstar Journal.*

*Synergy is addressed in various ways in the articles you will find in this issue. Some connections are obvious; others are more subtle. Definitions of synergy vary slightly—and yet all share in common the notion that the whole is more than the sum of its parts. Through synergy—a form of cooperation—creativity, productivity, and effectiveness result that would not be possible otherwise. When any two or more elements come together fully in a cooperative enterprise, the result is synergy. Synergy can be entirely personal—within parts of one's self. It can be in relationships—among family, friends, associates. It can be on a planetary scale—involving humanity and nature itself. Given the scope and complexity of the challenges we face today—as individuals and as lifekind—the potential and promise of synergy are instrumental to our goals to achieve a sustainable future. We have not treated the topic exhaustively in this issue of the Journal—but we hope we will stimulate your thinking. We encourage each of you to look for and act upon opportunities for synergy—a key to creative and constructive solutions to healthy lives on a healthy planet.*

*John Denver writes personally about some of his own experiences with synergy—stressing qualities of understanding, cooperation and love. Bob Samples follows with perspectives on the topic—including a provocative look at Darwinian theory and cooperation.*

*Dawn Marie Lynch invites us to create family environments with young children that serve to teach about peace in elegantly simple and effective ways. It seems to us that parenting is among the most personal and important realms within which to consciously nourish synergy.*

*Barbara Marx Hubbard stretches us to the edges of a global brain—a profound repository of synergic potential.*

*We are delighted to have the opportunity to include a few words from R. Buckminster Fuller, perhaps the leading theoretician and proponent of the universal expression of synergy.*

*The interface of economics and the environment is one within which the need for synergic approaches is great. Jay Hair describes one model that is working to bring together corporate and environmental leaders in sincere mutual efforts, transcending adversarial postures.*

*Ron Meyer gives an insider's look at the transformative potential of television. He describes his recent experience in developing a television program about Windstar for the Discovery Channel, "More than Enough for Everyone: The Windstar Experiment." See inside for information about viewing dates.*

*Synergy is an underpinning of efforts to explore space. Astronaut Jon McBride describes some of the challenges and results.*

*Lester Brown, Christopher Flavin, and Sandra Postel give us some detailed suggestions for creating a sustainable future—focusing in this issue on energy-related recommendations.*

*Finally, it's a celebration of good news! Carrie Click begins a new column in this issue. She offers examples of some of the many good works underway to help create and sustain healthy environments.*

*Make your plans to join us for this year's Windstar conference, "Choices for a Healthy Environment." We would welcome seeing you August 24-27 in Aspen.*

*Springtime makes synergy obvious. It is all around us in the combination of earth, sun, water and air joining with seeds to sprout new life. It smiles gloriously in the bursting of blossoms and leaves from branches that rested dormant through the winter season. We encourage you to go outside and enjoy the season's signs of synergy—and then to go inside, within yourself, to nourish synergy's creative promise in your own life.*

*Cheryl Charles and Bob Samples, Editors.*



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# METAPHORS OF SYNERGY

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As words go, synergy is an old word. It is also a timeless concept. My guess is that if Mother Nature chose to speak, her organizing ideas and syntax would be synergic. When the ancient Greeks unraveled the concept of synergy from their centuries of trying to understand how the world works, they chose the words *syn* (together) and *ergeein* (work or cooperate). A literal translation gives us "to cooperate together."

R. Buckminster Fuller was an architect, structural theorist, and visionary. He was probably the most influential thinker to popularize synergy as a word. Fuller was dedicated to the concept of synergy. His two classic works, *Synergetics I* and *Synergetics II*, frame a scientific, social and structural world view that is based on synergy. His definition of synergy differed from the classic Greek definition in that it was stated in terms of systems. According to Fuller, "Synergy is the behavior of whole systems,

unpredicted by the behavior of their parts taken separately."

For several hundred years, scientific philosophy has reflexively required us to break down objects, events, and phenomena into their component parts for study. That may be why many of today's students think that the only way to study a frog is to cut it into small pieces and make detailed drawings of the organs. Before the scalpel, the frog's organs were synergetic; that is, they were cooperating together—but, after the scalpel, the organs and the frog were categorized, classified, labeled, and dead. We have developed methods, techniques and scholarship related to the integrity of separate parts and somehow presumed that we understood whole systems better. The record now suggests that such a conclusion is in error.

While there is nothing wrong with studying parts of systems—whether

that system is a frog, society, or galaxy—we can no longer defend the idea that we approach full understanding of the whole of the system by doing so.

To illustrate, consider the fact that contemporary science is beginning to rethink its ways of looking at the world. We see the once hallowed "exact science" of physics becoming more and more comfortable with uncertainty and tentativeness when considering the relationships between its fields of study. Whereas the world of physics was once dominated by levers, gears, pulleys, and the discrete measurements that characterized them—we now see physics drawn into the shadowy world of the atom and its legion of subatomic particles as well as into the realm of galaxies, black holes, and curved space. Contemporary physics is immersed in the study of synergic relationships. It is attempting to look at the behavior of whole systems.

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Bob Samples

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The famous biologist Charles Darwin was fond of studying frogs and hundreds of other creatures. He studied them holistically, in their natural habitat. He also studied them reductively, exploring their innards and fossil forms. Darwin was very specific about the differences in the kinds of information he gained from his various approaches to research. His ideas concerning organic evolution, of course, changed the face of science to this very day. Ironically and unfortunately, his holistic and synergic ideas were essentially lost in the mountains of data that he gathered from his detailed, reductive analysis of individual animals. His findings about the vast sweep of evolution were clearly framed in notions of synergy, of cooperating together—yet, for the most part, Darwin's contributions to science are characterized by his work to take things apart to study them.

Darwin became known as the parent of the idea of "survival of the fittest." To most people, that means violent competition ruled by fang and claw. Fittest means the strongest, most powerful, and victorious in combat. The phrase has permeated scientific thinking for nearly a century. What is more, it was borrowed by economists and other social scientists, and given the status of a natural law. The irony of it all is that the synergy of cooperating together is now being seen as a primary criterion for being the fittest. Many contemporary biologists and evolutionary scholars are now convinced that Darwin himself understood this. They believe that he saw cooperation as the organizing basis for his findings, rather than competition. It is clear that aggression is a characteristic of much of what takes place in natural systems—but aggression and competition are remarkably different ideas.

We can turn an appreciation for synergy into a guiding force in our

own lives. The story of synergy encourages us to cooperate with ourselves and each other—and to recognize that each discrete experience is part of a larger whole. We are beginning to respond to the tacit invitation to conduct ourselves in a spirit of cooperation with our own inner beings, our relationships, and the larger realms of humankind and naturekind. We are offered the possibility of seeing ourselves wedded to the larger, more pervasive, connectedness of all things.

A synergic mindset of cooperation and wholeness offers a promising vista of the future—more promising and inherently healthy than a divisive mindset of competition and fragmentation. Alienation and loneliness are characteristics of divisive mindsets. Community and autonomy are characteristics of synergic mindsets. Synergy and a synergic world view offer us an embracing vision of wholeness—and simultaneously honor the discrete attributes of experience in the lives we each live.

Each of us may have moments of blazing triumph as well as shattering and anguishing experiences of despair. A fragmented and divisive world view tends to focus us on the smaller units of experience to the point that we may never understand that both triumph and despair are parts of a larger way of being. A synergic world view draws us toward the entire mosaic of experience. It extends us beyond bits and pieces into the grand sweep of promise and fulfillment.

Consider these parts: Outrage at the desecration of the world's rainforests, Mother Teresa's dedicated commitment to humanity, and a child's triumphant excursion into fingerpaints. A synergic mindset encourages us to view these parts with an equivalence of spirit. They may not be equivalent in scale, but each in its way invites us to be more human and more naturally connected with the whole of life.

If my world view is fragmented, I see each of these phenomena as separate and of differing worth. I see that they can and should be rank-ordered and prioritized. I find myself

in an adversarial relationship with all who choose a different ordering. I find myself in competition with my own kin.

If my world view is synergic, then I see these and all the events of life as being woven into a tapestry of all being. I see myself as a viable component of everything that is. My choices are not seen as the best or the most right, but rather as choices by which I have elected to live. You and your choices are not in competition with me and mine but rather are an extension of the goodness in all life. In a synergic community of life, choices that harm others—with intent or by accident—are eventually outweighed by the collective goodness of the whole.

One might have to be a hermit to have escaped talk of the paradigm shift in the consciousness of contemporary world citizens. We are in the midst of a shift in consciousness where the whole is emphasized as well as the separate and individual parts. A paradigm is the consensual way that we organize and process both information and experience. When we were in agreement that the only way to do science was through fragmentation and reductive study, then science was done that way. It was considered irresponsible to do otherwise. In the reductive paradigm, information is often seen as fixed and true. People who buy into this idea are convinced that there has to be dramatically new formation for a consensual pattern to shift. They are prone to using familiar information in conventional ways and become skilled at waiting around for massive breakthroughs in science, technology, law, and medicine, for example, in order to gain permission to change their ways of thinking.



We now know that it is not necessary for dramatic new information to appear in order for a paradigm shift to take place. All that is needed is for existing information to be processed in a new way. Information itself does not cause a paradigm shift. The way we think about information causes a paradigm shift. Inevitably, when we think about information in a new way, massive amounts of new information pour forth.

Synergy and a synergic world view offer us the benefit of wholeness. Few have argued the effects of this world view better than Dr. Jonas Salk, discoverer of the Salk vaccine for polio. In his prophetic book, *The Survival of the Wisest* (New York: Harper and Row, 1973), he compares the differences between reductive and synergic world views, which he calls Epoch A and Epoch B. This is my synthesis of comparisons he makes.



**Epoch A (Reductive)**

WAR  
FRAGMENTATION  
QUANTITY  
ABSOLUTE VALUES  
ANTI-ILLNESS  
REVOLUTION  
COMPETITION  
CLOSED SYSTEMS

**Epoch B (Synergic)**

PEACE  
WHOLENESS  
QUALITY  
RELATIVE VALUES  
PRO-HEALTH  
EVOLUTION  
COOPERATION  
OPEN SYSTEMS

What we have witnessed in the last century is a shift—from our past slavish devotion to maintaining parts, to a new commitment to maintaining wholes. We have seen a shift from alienation and separation to community and unity. Synergy as a concept is guiding us toward a kind of wholeness that may, in fact, embody its definition—cooperating together.

As we reflect on the concept of synergy, we may feel both awe and a sense of being unfulfilled. It is likely that synergy is part of the very fabric of the natural world. None of us can hope to see it at once—the entire tapestry of the universe—but as we try, there are larger and larger vistas to apprehend. We sense, we feel, and, in a small way, we understand. What we do know is that if our minds are committed to sensing the whole, we will experience the enchantment of being part of all that is. In a guiding sense, our embracing universe will become part of us.

To Bucky Fuller, synergy provided the most basic expression of the ways the universe governs itself. If we become frustrated in our attempts to understand synergy, however, it is important for us to return to the synergies of scale—sensing our own connectedness with all that exists, parenting in ways that promise the fulfillment of our children's dreams, and sensing the adventures of contentment and risk embodied in being in love.

So synergy is cooperating together—within ourselves, with others, and within whole systems on any scale we choose. Synergy defines the behavior of whole systems. It is premised in the realization that the whole is more than the sum of its parts. Personal and common to each of us, synergy is love—love for self, for each other, and love for all that is.

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*Bob Samples is an independent scholar, author, member of the Windstar Board of Directors and Co-Editor/Designer of the Windstar Journal.*

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