

Syntony as an Organizing Force in Societal Evolution

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Abstract:

Syntony is the means by which appropriateness is gained. The capacity to distinguish that which is appropriate from that which may not necessarily be so is a matter of discretion. Life in the natural world teems with examples of “goodness of fit” — between living system and milieu; life process and evolutionary dynamic; organismic form and organic function. These systems of syntony are manifest expressions of the natural syntony sense which all beings possess. However, this sense has atrophied to the point of vestigial capacity in human beings due largely to our ever increasing dependency on technologically mediated relations with our environment and our consequent distancing from nature and natural process. Study of grouping behavior among social animals (schooling among fish; flocking among birds; herding among mammals) provides insight into systems of syntony in which the syntony sense is strong. Certain human societies also demonstrate strong syntonic capacity, although for the most part, they are nested in some form of aboriginal culture. A consideration of the different ways in which syntony is manifest in both the ecosystemic and societal settings permits a greater understanding of syntony as an organizing force in societal evolution. Such understanding may provide a basis for discerning evolutionarily appropriate courses of action, both at the individual and at the collective/community levels. This paper seeks to provide the basis for this understanding. It is structured as follows: a brief introduction to the concept of syntony, reviewing the origins of the term and its denotative and connotative value in the context of evolutionary systems inquiry; an exploration of various systems of syntony as illustrated by grouping behavior among social animals, specifically, schooling among fish and flocking among birds; a consideration of cases in which expressions of the syntony sense are evident in human behavior; and an evaluation of the potential inherent in syntony as a means of empowering individuals and groups to engage in life-long transformative learning toward sustainable pathways of human social development in accord with broader life processes on Earth.

Key Words:

Syntony, evolutionary learning community, evolutionary systems design, sustainable development, individual and group empowerment.

The Word on Syntony

Becoming masters of our own destiny is not a quest of foolish arrogance – it is the survival imperative for sustainable co-existence of humankind with the life support systems of planet Earth. The mastery entailed is not one of domination but rather one of harmonization. It involves taking to heart and bringing to life the age old adage, “we can not direct the wind, but we can adjust the sails.” Learning how to sail the currents of evolutionary change is what syntony is all about.

The signs of change are pervasive, and the rate of change is itself changing and accelerating, speeding contemporary societies toward a critical threshold of stability and engulfing the individual in a confusing blur of behavioral choice. How can we learn how to have change happen through us, not to us — to work with change, to cope with uncertainty, in sum, to dance with evolution?

One way to gain this basic evolutionary competence is through learning syntony. Syntony is a purposeful creative aligning and tuning with the evolutionary flows of which we are a part. The term is currently relegated to the realms of radio engineering to denote tuning in to radio frequency signals or creating effective signal resonance by harmonizing the frequency of wave emission patterns. But it has been used by others, including Teilhard de Chardin and Erich Jantsch, to denote a process central to evolutionary competence. Jantsch, for example, proclaims that “as we have learned (though not too well) to design social roles, we shall have to learn now to design systems of syntony.”ⁱ

So the concept of syntony reaches far beyond the radio to describe the processes of convergence and divergence that are at the heart of general evolutionary forces. But what does it mean to consider that, as a process, syntony is a purposeful creative alignment and tuning with the evolutionary flows of which we are a part? It means listening to the rhythms of change and learning how to play our own melody in ways that harmonize with the larger piece. It involves finding and creating meaning and evolutionary opportunity, both individually and collectively. Just as the jazz musician playing improvisations feels and knows how to jam in interaction with both fellow musicians and audience response, so can we learn to find and create resonant processes with the dynamics of those things with which we interact. This type of purposeful

activity need not imply premeditated acts, planning and strategy, or intentional design. In its highest form, syntony becomes a natural way of being and becoming with the world and is as effortless, and spontaneous, as breathing.

Many animals, as we shall see, naturally live in systems of syntony, and yet for most of our species, our syntony sense has atrophied into a vague and often misunderstood (if not entirely ignored) intuition. Our quest, then, is to regain this ability. But for most of us, becoming a master of syntony is not as effortless or spontaneous as breathing. It takes more than just good intentions, for as famed systems thinker and economist Kenneth Boulding once said, “intentions are fairly easy to perceive, but frequently do not come about.” By learning to create systems of syntony it is possible to elicit harmonious patterns of change — in ourselves, in others, and in our broader environment — purposefully, consciously, and yes — intentionally!

Do you dance? I mean, are you part of this “sacred dance,” as Brian Goodwin calls it, where organisms move in harmony with their environment — are you consciously part of it? If you are, then you know, at some level in your being, how your every step sets up ripples that interact with and inform the possibility space of not only your own place, but of those clear across the dance floor. Over a century ago, T. H. Huxley noticed that the life-affirming values behind this sort of syntony just didn’t square with Darwin’s image of nature: “The practice of that which is ethically best — what we call goodness or virtue — involves a course of conduct which, in all respects, is opposed to that which leads to success in the cosmic struggle for existence. In place of ruthless self-assertion it demands self-restraint; in place of thrusting aside, or treading down, all competitors, it requires that the individual shall not merely respect, but shall help his fellows; its influence is directed, not so much to the survival of the fittest, as to the fitting of as many as possible to survive. It repudiates the gladiatorial theory of existence.”ⁱⁱ

We have much to learn from nature. As Robert Augros and George Stanciu point out, “her attributes of simplicity, economy, beauty, purpose, and harmony make her a model for ethics and politics.”ⁱⁱⁱ This model is one with which our species would do well to familiarize itself... It involves learning or re-learning what it means to be part of a natural community that is itself a system of syntony. Fritjof Capra points to this as “the greatest challenge of our time: to create sustainable communities — that is to say,

social and cultural environments in which we can satisfy our needs and aspirations without diminishing the chances of future generations.”^{iv} In terms of syntony, it is less a matter of creating these communities than of co-creating the conditions for their emergence. That is, co-creating the sacred dance of being and becoming with the other jazz players who share our Earth. Of course, this means focusing not only on the social and cultural environments that Capra mentions, but on the other embedding contexts that define us and give meaning to the life music we make and that, in turn, create the rhythms by which we continuously flow into existence.

Sure, we flow into existence whether we care about syntony or not. But the quality of the flow, and the degree to which it sustains us and the other processes and patterns that emerge with us in the course of evolution, well that just might depend on the extent to which syntony is encouraged or neglected. The background against which systems of syntony emerge is the broader frame of our earthly terrene. The various biomes provide different contexts for ecological habitats to arise, and their arising is both the product and the process of the life they embrace. Healthy and vibrant ecosystems are characterized by communities of beings that interact with each other and with their embedding environment with high degrees of syntony. For human beings, these are the ‘sustainable communities’ of which Capra writes.

Next, we look at non-human communities in which systems of syntony are particularly noticeable. By considering the more salient examples of syntony in nature, we may be able to glean some understanding of how to engage in it with greater deftness. Frankly, most other animals are more deft than we are at picking up the rhythms of syntony and constructively playing their part. Maybe it’s just that we mishear the rhythms and are deftly tuning in to imaginary harmonies. Or maybe, in Western Man’s mad dash to mechanize nirvana, we have been so impressed by the bang and boom of our technified world that it has left us less deft than deaf.

So let’s turn to an ear to natural communities that jam to the rhythms of syntony. Doing so will help us get a feel for how syntony can be created. After all, there are many animals and who seem to have the syntony thing down pat with not so much as a conscious flicker of an eyebrow (assuming they have one). Perhaps we can learn from them, or rather, re-learn from them how to live as systems of syntony.

At School

Patterns of social grouping behavior in animals often demonstrate remarkable levels of syntony. A school of herring, a flock of blackbirds, a herd of zebra — all can act as one, with such coordination of volition and such unison of movement that the group often seems like one being. How do these animals synchronize with each other with such coordination? For us humans to approach similarly tightly choreographed performances we have to train as highly skilled artists and athletes for many years.

A school of fish in flight from a predator is something to behold. The way they hold together as they dart forward, change direction, slow their movement and suddenly take off again indicates that they're in it for much more than just safety in numbers. Indeed, by being able to move as one they confound their predator by really appearing as one much bigger animal. This type of pack behavior is the signature of social groups in the animal kingdom, forming “a collection of eyes and ears that may be more sensitive than those of an individual.”^v

Like us, many species of fish spend their entire life in schools. But in the case of fish, that's okay. The term, “school,” was first used to describe group behavior among fish in 1927. Basically, it has nothing to do with the type of schools most of us have had the misfortune to attend during the formative years of our life (even though it leads ichthyologists — those who study fishes — to talk about such funny things as “the elementary school of two fish”!^{vi}). Instead, “schooling behavior can be regarded as a process in which the behaviors of individual fish are organized by a kind of transmission of information between individuals.”^{vii} Bingo! This speaks to the development a sense of syntony. Let's explore it a bit further.

No matter how complicated their acrobatic path, schooling fish always stay close together but never collide. Researchers have ascribed this ability to various specialized adaptations that bestow heightened environmental sensitivity to these creatures, allowing them to react to new situations almost instantaneously and as one. These adaptations come in a variety of forms: specialized organs that run along the sides of fish in slender bands that detect changes in local electric fields (such as are emitted by adjacent fish); specialized skin tissue that is hypersensitive to vibrational movement

transmitted through the water from fish to fish; specialized skin cells that warn fellow fish by releasing alarm substances (originally called *Schreckstoff* or “scary stuff,”^{viii} and now identified as pheromones produced by ASCs or “alarm substance cells”^{ix} — much more scientific, don’t you think?!); or specialized behavioral response patterns of mutual attraction, distance maintenance, and an “appetite for following companions” (thereby acting as “leader” of the school for only brief moments at a time).^x But no matter how you work it out, schooling fish have developed an ability to “read” their surroundings in such a way that they can all decode the same the messages in syntony. Basically, they are flowing in-formation.

This ability to “read” the environment, to “listen” for messages, to pay attention with heightened sensitivity, this has conferred evolutionary advantage on creatures whose survival needs were based on interconnection and interdependence. Schooling fish have evolved their physiomy in an intelligent way. This does not mean that the fish themselves are intelligent, but rather that the evolutionary stable strategy (what sociobiologists call, ESS^{xi}) of entire populations of schooling fish has been successfully adaptive in meeting the survival challenges of their environment. In essence, “the style of group life is one of behavior patterns acquired by the species through the evolutionary process.”^{xii} In order to maintain the syntony, the fish have adapted, the fish have changed, the fish have evolved cells, tissues, organs, behavioral responses that keep them harmoniously tuned to their environment.

Now of course, all creatures that are evolutionarily successful do this, but it’s just that schooling fish do it in a way that we can observe. Most other creatures align their behaviors with the flows of their environment in more subtle ways, or in ways that are only attested to by the evolutionary observation of how well suited they are to the particular ecological niche they occupy. We will look at some more examples in a moment, but for now, the key point is to recognize how the example of syntony in the schooling behavior of fish says something about their ability to listen for change and to read it as it happens. The something we should pay attention to is why such highly social creatures — ones that are also highly interactive with and interdependent on their environment — evolve such effective systems of syntony. After all, in these respects, human beings are fairly fishy.

Those Flocking Birds!

In order to get a better sense of syntony (as a non-conscious but not passive force) in nature, let's do a quick check on a few other life forms that have developed their syntony sense in ways that are perceptible to us. Of course, what we're working toward here is a thorough understanding of this phenomenon so that we can then see what we can do to cultivate it in ourselves and in our interactions — on purpose. Acquiring the creative competence of conscious syntony is what will make the life-jazz we play different from the non-conscious harmonies of the systems of syntony we are exploring here. But in order to do it, we've first got to look to nature to learn how it's done. Then we can take it from there and join the cosmic improv!

There is a fair chance that you have had more opportunity to observe flocking behavior in birds than schooling behavior in fish. You may have noticed how sometimes a flock of birds can seem to be wheeling around (and around and around) with no particular objective discernible to us. At times, it almost seems as if they are flying together just for the fun of it! In fact, some people tend to believe that that's exactly what they are doing:

Flight is an art akin to music, with rhythm and feeling of movement as its foundation Some species (of bird) have developed flock-flight in unison to such perfection that the inquisitive human is forever wondering how they achieve this simultaneous movement without a conductor to assist. ... All are swayed by the same impulse or inspiration, and each feels a supersensitive consciousness of the other player's interpretation, often to the point of feeling it slightly in advance ... and they are not only thrilled themselves, but their audience can feel the thrill of their performances.^{xiii}

Seemingly more so than with fish, birds combine phylogenetic adaptations (such as cell, skin, organ, or innate behavioral responses) and learning experiences in the display of their sense of syntony. In discussing the nature of avian navigation, Theodore Xenophon Barber explores the various ways migrating and homing birds navigate: using the sun as a compass, "reading" the stars, "reading" the wind and the weather, "reading" visual landmarks, "reading" the earth's magnetism, or "reading" odors, infrasounds, and other subtle cues. He points out that "most birds use several kinds of information. Individual birds of the same species may use different kinds of information, and the same bird may use one channel of information at one time and

switch to a different channel at another time.”^{xiv} So, for example, homing pigeons normally draws on information about both the sun and the earth’s magnetic field lines to find their way home. However, as they gain experience and become more proficient in “reading” directional information in their surroundings, they demonstrate the ability to adjust for displacement using one source or the other.^{xv} Barber describes an experiment where pigeons were disoriented and displaced (by tampering with their local magnetic fields and transporting them in total darkness to a place unfamiliar to them) and then set free to return to their homes. It turns out that “experienced pigeons, but not inexperienced ones, are able to return.”^{xvi}

So what does this mean, regarding syntony? Well, aside from the fact that humans often experience similar sensations of being disoriented and displaced (often for much of our life!), it says something about the ability to learn to “read” change intelligently. We are starting to see the emergence of individual decision making based on an array of informational options derived from various environmental cues. Having learned how to “tune in to useful frequencies” is what helps experienced pigeons survive displacement and disorientation by re-orienting themselves and proactively changing course (inexperienced birds, on the other hand, are typically unable to change direction when thrown off by storms, winds, or human experimenters).

Changing course... navigating through chaos... re-orienting to sustainable patterns of change and re-aligning with sustainable processes of transformation. These challenges are not just for the birds! But while the birds demonstrate a strong sense of syntony and an ability to engage in complex learning, us humans seem to have a strong ability to engage in complex learning and only a rudimentary sense of syntony. Or is that too much of a generalization? Let’s look a bit for evidence of the syntony sense in us Human Becomings.

Humans in Syntony?

Why don’t we continue our consideration of navigational ability? Let’s compare how humans and birds do it. Natural human navigational ability is nothing to write home about in the animal kingdom. However, through effort and practice, we can learn to navigate in any of three ways. One is through computer aided navigational

technologies. Frankly, it's a snap to go from anywhere to anywhere else if you've got the right equipment. With civilian access to the former military network of Global Positioning Satellites, I could know where I am and/or how to get to any destination on Earth by using my old PalmPilot™ hand-held personal data assistant and an equally small DeLoreme™ portable satellite receiver. Such "you-are-here" technology is simple and easy — to *use*. To build it is another matter, entirely. So if you use it to navigate with ability and ease, is it fair to say that you are a highly skilled navigator with great competence and expertise? Yes and no. The fact of the matter is that you could navigate with the best of them. However, it is also true that you would be utterly dependent on a technology that you most probably don't fully understand, let alone be able to fix should something go wrong.

Now, if you want to develop the skills of a professional navigator by earning your stripes, then you must be prepared for many years of scientific training in mathematics and physics, and loads of practice before you will be able to guide a craft to a particular goal by correctly interpreting the instruments upon which you still depend. You will need to know how to use things like sextants, chronometers, magnetic compasses, log tables, charts, and nautical almanacs. If you can, I'd be happy to call you a highly skilled navigator with great competence and expertise. Absolutely.

Still, none of this seems to provide much indication of a sense of syntony on our part, does it? Something's missing. For us to demonstrate a sense of syntony, we would need to be able to do such things as navigate to a particular goal over seemingly featureless seas *without* the aid of instruments, and who but the birds can do *that*? Actually, there are people who can. Studies have been conducted on the phenomenal ability of a small number of individuals living on the scattered islands of the South Pacific.^{xvii} Apparently, they are able, like birds, to accomplish such navigational feats as to travel without instruments to a tiny port at a particular place on a distant spec of land in a vast and undifferentiated sea. Our bird friend, Barber, tells us these Polynesian navigators are "highly admired and respected [members of] their societies because they have special knowledge, special awareness, and very useful skills that they acquire after years of intensive apprenticeship with a master navigator and years of supervised practice."^{xviii}

Such natural navigators (as distinct from the technological navigator and the professional navigator described earlier) seem to have what I have been calling a sense of syntony. They know how to “listen” to their surroundings for information, and how to “read” the signs of change in the flows of which they are a part. They learn how to interpret the rising and setting of certain stars as a natural compass along with the apparent movements of the sun which serves as a supplementary compass; the wave patterns; certain types of wind and current flows; cloud formations; the color and turbidity of the ocean surface; fog belts where cold and warm waters meet; sudden changes in the subtle play of ocean waters; and dependable spots where whales, dolphins, jellyfish, and particular species of fish can be found. To use a linguistic analogy, they read this information and obtain meaning from it because they are literate in this language of nature. In fact, they have developed their ability to “tune in” to the signals of change and to harmonize their actions and interactions with them. And, without trying to control or direct the wind, they quite literally have learned how to adjust their sails in ways that nevertheless allow them to flow with these embedding dynamics with direction and resolve.

We are not talking about special sensory abilities to perceive magnetic fields, here. Nor are we ascribing these capabilities to a mysterious sixth sense or to intuition, premonition, hunches, or gut responses. Syntony is down-to-earth — literally. It is getting in touch with our context and the processes of change that give shape to the dynamics of our context. It is tuning in to the patterns of change and weaving our actions in accord with them. But who else, aside from these Polynesian natural navigators, show signs of this syntony sense in humankind? Let’s go to Australia and see.

The Australian Aboriginals are reknowned trackers, deftly finding their way over land much as the Polynesians navigate over water. But the sort of navigating they do is about much more than getting from one place on earth to another without getting lost. It is really about knowing where they are and what role they should play at any given moment in the broader scheme of things. In one of his many journeys over the face of the Earth and into the worlds of different peoples, Bruce Chatwin describes the Ways these people follow, maintain, and continually co-create, calling them the

“labyrinth of invisible pathways which meander all over Australia” — the “Dreaming-tracks” or “Songlines” of the Aboriginals.^{xix}

The storytellers whose accounts Chatwin captures in his book, *The Songlines*, talk about the Ancestor’s song. This is the sacred song that ties all things together back to their mythical beginnings in Dreamtime — to the very beginning of the Ancestor’s song. The most secret and sacred couplet of the song is the first set of words the Ancestors called out: “I am!” Then each Ancestor said what they were, Snake, Cockatoo, or Honey-ant, and so the Songlines began. The Ancients sang their way all over the world, singing the rivers and ranges, salt-pans and sand dunes, calling all things into being and weaving their names into verse. Wherever their tracks led, they left a trail of music.

And since the world continues, and new things are woven into it all the time, so the Songlines continue. Or rather, according to the Australian Aboriginals, it is the other way around. The Songlines must be maintained and recreated, for the world is vibrant and alive and harmonious only in so far as they are perpetuated. No local group of Aboriginals “owns” a complete Songline. Each group “owns” only a section of these pathways and each group shares with other groups the responsibility of carrying out the ritual singing necessary to preserve the Songlines in their entirety.

Since the Songlines are made up of rocks, streams, waterholes, mineral deposits, and other natural landmarks strung together like the interconnecting strands of a necklace, the Aboriginals consider that the real-world illustrates mythic stories originating in Dreamtime, the time of creation the Ancestors sung. To them, these myths are “written” like a book in the Earth’s topography in the form of tracks that extend in all directions across the entire continent of Australia. They are like channels in the ground, like underground streams running throughout the land, flowing with messages and information that the Aboriginals access through spiritual dreaming and ritual singing. The Songlines link localities with each other and with the mythic episodes from Dreamtime, providing thematic support for understanding and co-creating relationship.

As they travel from place to place over the land, the Aboriginals will sing their way along these strands. They stay connected — with each other, with their ancestors,

with the nature around and in them — by invoking and honoring the mythic map of the Songlines, with all their real-world relationships and landmarks. In this way, the Songlines serve as reference points to the Aboriginal wayfarer, like the sun and the stars do for the Polynesian seafarer, helping them find themselves and each other, and helping them understand both the familiar and the new. Through the overlapping lens of myth, nature, and relationship, Songlines connect people in networks of communication, cooperation, and culture.

So here we have another example of “tuning” and “aligning” — of syntony in human ways of being and becoming with the world. And it points to something the birds, and most likely the fish, were on to as well: the ability “to live in harmony with deep enjoyment.”^{xx} Have we forgotten how to do this? Clearly some of us haven’t. But many of our our mega-industrial, hyper-technological, and super-rational cultures have damped out our syntony sense to the point where it is this atrophied little thing dangling off the edge of our consciousness. In desperation we turn to mysticism, magic, or transcendentalism, but in doing so we often “tune in” to things not at all part of our current realities. So how are we supposed to know what to tune in to, if some things diminish syntony while others amplify it? Before we come to grips with this question ourselves, let’s take a look at how some other people do it. This will serve as our last example of indications of the syntony sense in Human Becomings. Of course, there are other peoples and other people who have a highly developed sense of syntony, but as with the fish and the fowl, syntony is perhaps most evident in these examples.

“The idea of ‘appropriateness’ is central to the Indian experience of the natural world,” says N. Scott Momaday.^{xxi} He explains that in the native American Indian worldview writ large, appropriateness is “a basic understanding of right within the framework of relationships, and, within the framework of that relationship ... between man and the physical world. That which is appropriate within this context is that which is *natural*.”^{xxii} He tells a story about appropriateness that is probably the best way to communicate how it is lived. This is what he tells:

There was a man living in a remote place on the Navajo reservation (in Southern Utah) who had lost his job and was having a difficult time making ends meet. He had a wife and several children. As a matter of fact, his wife was expecting another child. One day a friend came to visit him and perceived that

his situation was bad. The friend said to him “Look, I see that you’re in tight straits. I see you have many mouths to feed, that you have no wood and that there is very little food in your larder. But one thing puzzles me. I know you’re a hunter, and I know, too, there are deer in the mountains very close at hand. Tell me, why don’t you kill a deer so that you and your family might have fresh meat to eat?” And after a time the man replied, “No, it is inappropriate that I should take life just now when I am expecting the gift of life.”^{xxiii}

We might say that this man was “in touch” with his world, and that is essentially the same as saying he is in syntony with it. This sense of appropriateness, of goodness of fit, is clearly a moral sense as well, as Momaday points out: “There is this moral aspect, and it refers to perfect alignment. The appropriation of both images into one reality is what the Indian is concerned to do: to see what is really there, but also to see what is *really* there.”^{xxiv} Okay, this starts to get a bit cryptic, but we can try to understand this “perfect alignment” by considering the two visions of the relationship between humans and the natural world that the Indians (particularly among the cultures of the Plains Indians) hold simultaneously. One is physical and the other is imaginal. Momaday explains it like this:

... it’s rather like looking through the viewfinder of a camera, the viewfinder which is based upon the principle of the split image. And it is a matter of trying to align the two planes of that particular view. This can be used as an example of how we look at the world around us. We see it with the physical eye. We see it as it appears to us, in one dimension of reality. But we also see it with the eye of the mind. It seems to me that the Indian has achieved a particularly effective alignment of those two planes of vision. He perceives the landscape in both ways. He realizes a whole image from the possibilities within his reach. The moral implications of this are very far-reaching...^{xxv}

Aligning the ideal and the real... This is starting to get at what conscious syntony is all about. The syntony quest involves creating (as in imagining/dreaming/visioning) images of reality that are both ideal and have this “goodness of fit,” or appropriateness, with the world around us. And doing so in ways that relate to both the things and, perhaps more importantly, to the patterns and processes that define and sustain these things over time. To do so we have to recall (because we really do know) how to listen to and see the world around us so that we can hear the patterns and read “the writing on the wall” (or in the sand, as the case may be). Once we begin to remember how to tune in to our continually becoming world, we start to move from merely being aware

of it to becoming conscious of it. The embodiment of this awareness in action is central to developing a consciously creative syntony sense. So this, to a large extent, is our quest: how to develop an *awareness* of the challenges that sustainable human co-habitation with life on earth entails, and in the process learn how to develop an *evolutionary consciousness* as the platform for engaging in consciously created syntony.

Syntony in Society

Meeting the challenge of this syntony quest is entails learning to co-create with the dynamics of change, neither forcing the process nor being swept away by it. The alternative to forcing the process of change and to being swept away by it has not really been an option until the last few decades of the 20th century. Historically speaking, humankind has pursued this strategy more or less consciously in order to gain mastery over nature. We can now live on the north pole, in the tropical rain forests, out on the desert or under the sea. We do not need fur to keep us warm; we can fabricate clothing and we can build houses and install heating. We do not need sharp claws or powerful jaws to get the food we need; we can use forks and knives or chopsticks to eat with and we have tools and machines to harvest and process our provisions. And we do not need piercing voices or specialized antennae to communicate among ourselves: we have developed systems of communication to relay information far and wide. In fact, now that we have found evidence of substantial deposits of water hidden away on the moon, NASA engineers are even considering plans to set up a human colony there.

Clearly, the progress of far-reaching social structures with powerful technologies has allowed us to change the face of the earth. We have adapted our environment to us, molding and modifying our surroundings however we please in order to be more comfortable. We also have seen fit to do whatever we like with the animals and plants that share our planet. If it entertains us to kill a bull for sport, then we make a glorified spectacle of it, and if we enjoy decorating a Christmas tree in our home, then each year we cut one that has taken years to grow so that it can adorn our house for a few weeks (and often, after that, the tree becomes garbage — stuck in a plastic bag to be carted off as non-recyclable landfill). Those of us who eschew sport hunting may think of ourselves as highly civilized and thoroughly moral planetary citizens, but how often do

we act in ways that show we think nothing of taking the life of other living things for our simple pleasure? If we like the smell of wildflowers in our home, aren't we still willing to cut fresh ones every day to please our senses? While each individual act of doing so may not change the world for good or for bad, the attitude that allows us to engage in such acts could.

By the dawn of the third millennium, this strategy of adapting the environment to us in accordance with our every whim has brought us to the threshold of sustainability with the life support systems of planet Earth. In considering the consequences of this way of being with the world, we must begin to explore the range of implications of this anthropocentric approach of adapting all to us. But for the moment, it is enough just to keep in mind this age old (and increasingly obsolete and dangerous) manner of dealing with change and uncertainty. It has been the hallmark of the human change agent, but it may not be the legacy we wish to leave.

There are alternatives. As you might imagine, if a long period of human history has been marked by a certain type of behavior (in this case, adapting the environment to us), then when people finally decide they want change they often swing the pendulum of behavioral response to the other extreme (in this case, adapting ourselves to the environment). This is what many of today's more radical "green" movements advocate. Deep ecology, the basic philosophy in which they are grounded, is sound enough, but unfortunately, it is often taken to extremes.

Fritjof Capra observes that "the old paradigm is based on anthropocentric (human-centered) values, [whereas] deep ecology is grounded in ecocentric (earth-centered) values."^{xxvi} If you interpret this to mean that we should no longer focus on human interests and *instead* turn our attention to the demands of our planet, then you may well come to the conclusion that human beings are undesirable parasites who are in the process of destroying their host, and that the best thing for the planet would be to get rid of them. Dee Hock once asked us to imagine what would happen if all of a sudden, in the magical blink of an eye, all human beings suddenly vanished off the face of the earth. According to him, there would be this tremendous sigh of relief from all creatures and all things on Earth, and indeed, from Earth herself.^{xxvii}

Well this may be true, but then to decide that everything we do must henceforth be bent to the ideal of “zero environmental impact” may be going a bit far. A human development strategy that is based on adaptation to the environment would soon lead us back to the caves. In fact, if we take the most extreme position, we may seek ways to help Earth “cleanse” herself of the ravages of humankind. After all, life will go on — with or without human beings. Indeed, since life may actually go on much better without human beings, our greatest contribution to cosmic evolution may be to ensure a healthy planetary ecosystem by removing its prime threat — us!

So the argument goes... At least, as advanced by those who are reacting to the legacy of adapting the environment to us by saying we must now fully adapt ourselves to the environment. There must be an alternative to these two approaches. The first one makes us the villains of evolution by casting us in the role of planetary home wrecker. The second one makes us the martyrs of evolution by suggesting that we should safeguard Earth and all it holds by removing ourselves from the scene. If one strategy is adaptation of the environment to us, and the other is adaptation of ourselves to the environment, what’s the alternative? How about co-adaptation — adaptation *with* the environment?

When we seek to adapt ourselves *with* the way in which something else is evolving, we embark on a syntony quest. As we transit from one historical period to another, across the dividing line of a millennium, we are beginning to explore such ways of fitting our individual melodies together to create sustaining and enduring harmonies. This is more than just a nice metaphor: it is the essence of syntony. As with the jazz musicians in the improv. session, we have to learn certain skills, to develop and practice certain competencies, and to manifest a willingness to think and act interactively. The notion of “will” — of active intention and passionate purpose — is crucial here. In fact, it is what makes the difference between merely *seeking harmony* and *engaging in a syntony quest*.

Look at the way in which the world is changing around us and you quickly see that “the future is not what it used to be,” as the old saying goes. But this is not news to you; you are already aware of the challenges that face us, both individually — in our personal/professional lives, and collectively — as a not-too-unobtrusive species living on this planet. Our common quest is of stewardship, of ways of being

responsible change agents while at the same time learning how to deal with the challenge of playing a meaningful role in a society that is part of a rapidly changing world. This seeking of ways to become stewards of life in partnership with Earth, of taking on the mantle of evolutionary co-creator, this is the syntony quest. And as with any significant learning adventure, the process of the quest is more critical than any particular outcomes to which it may lead. Through the ways of learning how to read and understanding the sort of consequences of change that we have covered together in these few pages, you may find ways to shape your own response to the challenge of this syntony quest. In the final analysis, the significance of syntony, as with life, depends on the consonance you create.

ⁱ Jantsch, Erich. *Design for Evolution: Self-Organization and Planning in the Life of Human Systems*. New York: George Braziller, 1975. P. 270.

ⁱⁱ Huxley, Thomas H. "The Struggle for Existence in Human Society." In *Evolution and Ethics and Other Essays*. New York & London: Appleton, 1925. Pp. 81-82.

ⁱⁱⁱ Augros, Robert and Goerge Stanciu. *The New Biology: Discovering the Wisdom in Nature*. Boston, Mass.: Shambhala, 1987. P. 231.

^{iv} Capra, Fritjof. *The Web of Life: A New Scientific Understanding of Living Systems*. New York: Anchor, 1996. P. 4.

^v Guttman, B.S. and J.W. Hopkins III. *Understanding Biology*. New York: Harcourt Brace Jovanovich, 1983. P. 665.

^{vi} Aoki, Ichiro. "An Analysis of the Schooling Behavior of Fish: Internal Organization and Communication Process," *Bulletin of the Ocean Research Institute of Tokyo* No. 12 (March 1980), p. 5.

^{vii} *Ibid.*, p.34.

^{viii} von Frisch, Karl. "Über einen Schreckstoff der Fischhaut und seine biologische Bedeutung," *Z vergl Physiol* (1941) 29:46-145.

^{ix} Bosio, Christopher. "Alarm Pheromones in Fish: Functional and Evolutionary Aspects," [manuscript, Spring 1994 - Colorado State University]

^x Aoki, *op. cit.*, pp. 52-60.

^{xi} Barash, David. P. *Sociobiology and Behavior* 2nd Ed. New York: Elsevier, 1977: p. 167ff.

^{xii} Aoki, Ichiro. *op. cit.*, p. 3.

^{xiii} Howard, Len. *Birds as Individuals* London: Readers Union, Collings, 1953, pp. 160-161.

^{xiv} Barber, Theodore Xenophon. *The Human Nature of Birds*. New York: Penguin Books, 1993. P. 69.

^{xv} C.f. W.T. Keeton. "The Orientation and Navigation of Birds," *Animal Migration* (D.J. Aidley, ed.), New York: Cambridge University Press, 1981. Pp. 81-104.

^{xvi} Barber, Theodore Xenophone. *op. cit.*, p. 68.

^{xvii} R.R. Baker and others have done intensive and extensive exploration of human navigational ability. C.f., R.R. Baker, *Human Navigation and the Sixth Sense*. London: Hodder & Stoughton, 1981; R.R. Baker, "Goal Orientation by Blindfolded Humans after Long-distance Displacement: Possible Involvement of a Magnetic Sense," *Science*, Vol. 210, 1980: pp. 555-557; R.R. Baker, "Man and Other Vertebrates: A Common Perspective to Migration and Navigation," in *Animal Migration*, D.J. Aidley (ed.), New York: Cambridge University Press, 1981: pp. 241-260; and in general, T.H. Waterman, *Animal Navigation*, New York: Scientific American Library, 1989.

^{xviii} Barber, Theodore Xenophone. *op. cit.* p. 70.

^{xix} Chatwin, Bruce. *The Songlines* New York: Viking Penguin, 1987.

^{xx} Barber, Theodore Xenophone. *op. cit.* p. 159.

^{xxi} Momaday, N. Scott. "Native American Attitudes toward the Environment" in *Contemporary Moral Issues: Diversity and Consensus* by Lawrence M. Hinman. New Jersey: Prentice Hall, 1996. P. 503.

(Originally published in *Seeing with a Native Eye: Essays on Native American Religion*, Walter Holdon Capps (ed.). New York: Harper and Row, 1976.)

^{xxii} *Ibid.*, p. 504.

^{xxiii} *Ibid.*, p. 504.

^{xxiv} *Ibid.*, p. 505.

^{xxv} *Ibid.*, p. 503.

^{xxvi} Capra, Fritjof. *op. cit.*, p. 11.

^{xxvii} Presentation given at the KaosPilot Univeristy. San Francisco, 9 February 1997.