

ETHICS, SUSTAINABILITY AND HEALING

(Talk to Alberta Round Table on the Environment & Economy & the Alberta Environmental Network)

Dr. Stuart B. Hill, then Assoc Prof of Entomology & Director, Ecological Agriculture Projects (11 June, 1992)

My aim in this presentation is to be supportive to everyone here (and to whomever subsequently reads this transcript) in the development of your own unique thoughts and actions related to the concepts of sustainability and sustainable development.

Let me first say that for me, sustainable practices are those that help repair and maintain natural systems; and development refers to human development, that is individual, community, and species psychosocial development and evolution. Thus, I define sustainable development as the maintenance of the planet and its ecosystems for optimal, equitable human development.

An important distinction needs to be made between our attitudes towards the planet and people on the one hand, and to interventions on the other. People and the planet must be regarded as sacred. The sacredness of people, for example, must always be respected, and they must never be subject to prejudice. They must, at least, be treated as innocent until proven guilty; and, even then, it is better to regard them as hurt rather than guilty, and in need of support in their unique process of recovery rather than deserving of arbitrary punishment. This implies a shift from a negative to a positive attitude. Human creations and interventions, on the other hand, must be regarded as guilty until proven innocent, and they must be constantly monitored to detect any negative effects (short-and long-term, near and far, and direct and indirect). One of the most serious mistakes that we commonly make is to treat our creations with more respect than both one another and the planet.

Preparing and presenting lectures such as this one, are beneficial for me, and probably also for you, only if they enable me to do new relevant thinking and take new relevant actions. To facilitate this I have chosen to examine the topic of ethics and sustainability through three main windows: psychology, boundaries and evolution. At the same time I want to keep in mind the concepts of paradox (my rule is that I am still missing an important part of the picture until I have seen the paradox), and the holographic paradigm (that is, anything I see anywhere I suspect everywhere). With respect to taking relevant actions, another benefit for me of being here is to solicit your help in the achievement of some of my goals, and to offer to be an ally to each of you in the achievement of yours. In relation to this, I will end my presentation with some comments on appropriate goals and their implementation.

First, I want to set the stage for doing new thinking. I have found the following four quotations useful to keep in mind:

Suddenly I realized that nobody knew anything, and from that point, I began to think for myself. (Maurice Nicoll)

The task is not so much to see what no one has yet seen, but to think what no one has yet thought about what everybody sees. (Arthur Schopenhauer)

Clever people know how to solve problems, wise people avoid them (reputed to have been said by Albert Einstein)

Both the outer revolution [social and political transformation] and the inner revolution [personal transformation/ must win if either is to succeed. (Rev. Andrew Young, colleague of Rev. Martin Luther King)

I also like to keep in mind the Chinese word for "crisis" (wei-chi), whose symbols represent the concepts of danger and opportunity.

Finally, I find that I regularly pass through three stages of perception when confronted with new ideas. Often my first inclination is to reject them; I want to hang onto the deceptive simplicity and relative comfort of my present ideas. Many of the dominant curative solutions to problems that are commonly employed are deceptively simple. A medical friend put this into perspective for me when he observed that we do not suffer from headaches because of a deficiency of aspirin in the blood. Note that most research funding is awarded to those promising to find such deceptively simple solutions, solutions that are invariably accompanied by longer-term negative side effects and dependencies. Parallels within politics and business are similarly common.

Eventually, when I finally admit that there might be something to this new idea, and I start to investigate it, I soon find myself in my second stage of perception, which I call confusing, paralyzing complexity. This is what I spend most of my life in, and as a teacher it is what I hope I get most of my students into during the educational process. If I cannot get them out of deceptive simplicity, no learning will occur.

If I hang in with this stage long enough, I experience glimpses of the third stage, which I call profound simplicity: when the penny drops and elegant solutions to problems become apparent – solutions that often involve ways to avoid problems or that turn them into benefits.

My experience is that passing through these stages is both difficult and humbling, but it can also be exciting, extremely rewarding and liberating. I suspect that this process has been going on for the members of Alberta's Round Table for the past two years, and that you will each have your own unique stories to tell about the experience.

One thing that commonly happens in this process is that we realize that we have been looking at the world through too narrow a window. Picture two duck hunters out in their boat, facing an empty sky without a bird in sight; one turns to the other and says, "But I know this is a good place – I've killed thousands of ducks here"; or a scientist referring to a new pesticide remarks to his colleague, "It's perfect, really – it kills every living thing within 200 miles, without otherwise altering the ecological balance!"

As a consequence of this type of thinking, we have developed inappropriate relationships with our resource base and the natural environment. It is now time to redefine these relationships, to abandon the pursuit of unlimited growth, and to learn to conduct our affairs within the bounds of natural limits.

The difference between deceptive and profound simplicity is particularly apparent within my own field of agriculture, whose history has been one of continually trying to take over nature's functions. In contrast, Masanobu Fukuoka, one of Japan's leading natural farmers, observed "while most farmers are repeatedly asking themselves what can I do, I am thinking what can I avoid doing by letting nature do it--or, at least, how can I be supportive of the natural processes." The deceptively simple approach is also evident within our reward system, which focuses on productivity but not maintenance. The outcome is the accelerated consumption of non-renewable resources, the degradation of renewable resources and the development of production systems that can only be maintained by increasing amounts of imported inputs.

This also illustrates the concept of paradox – that sustained productivity is better achieved indirectly by rewarding maintenance than directly by rewarding productivity. Thus, when we reward rehabilitation and maintenance, we build natural capital, support ecological integrity, and create the basis for sustained production. A friend in Manitoba demonstrated the potential of this approach when he purchased a parcel of land that was classified "unfit" for agriculture--high lime, semi-arid and nutrient deficient. Within five years, with no inputs, just an appropriate system of design and management, he was able to produce 1000 bushels of potatoes per acre. At that time (1968), the highest previous yield in Manitoba was 229 bushels per acre and the average for Canada was 168.

Of the three topics mentioned earlier, I want to start with psychology because this is the one that is most neglected and where there is most denial.

Psychology

What is happening socio-politically and environmentally in the world is the result of adult activity; and adult activity is the result of child development.

Thus, to achieve social and environmental sustainability we must sooner or later examine the process of child development. A leader in this awareness is Lloyd de Mause, who has documented what he calls the psychogenic theory of history, which essentially argues that history is written in childhood (in his words, history is the acting out by adults of group fantasies that are based on motivations initially produced by the evolution of childhood). This requires examining how children are conceived, born, and cared for, and how this affects their subsequent behaviour. From this perspective, a society in which most children are an accident would be expected to have problems.

de Mause claims that just as there has been biological evolution, there has also been psycho-social evolution, and with respect to child rearing, six overlapping stages can be recognized: infanticide, abandonment, ambivalence, intrusiveness, socialization, and helping, which is the stage that we are only now beginning to enter (I prefer to all this stage 'enabling'). This is the stage in which the unique developmental agenda of the child is supported, in contrast to the common imposition of the inappropriate agendas of parents and society. This is another area where the concepts of paradox and profound simplicity should be kept in mind. My own thesis is that our species is psychologically undeveloped, indeed that we are still at an incredibly early stage in our psychosocial evolution.

Note that if I am mistaken in this perception, and that further psychosocial development is unlikely, then, given the state of the planet, it is not difficult to conclude that we are in very serious trouble. In contrast, I am optimistic and believe that we have enormous potential to turn things around. This undeveloped psychosocial state has been maintained throughout history – through slavery, feudalism and now, industrial socialism and capitalism – by means of rewards, punishments, isolation and controlled access to information and resources. I believe that we now have means to develop psycho-socially that were not available previously, and that this development is a necessary prerequisite for the attainment of genuine sustainability. What I am saying is that we must recover from our distresses and, by doing this, become empowered, more aware and able to develop sustainable visions, goals, lifestyles, and actions.

Our distresses, though commonly denied, trivialized and masked, become evident when we try to keep our attention in the present (an exercise on this was done with the audience at this point). Our tendency to quickly drift into the future and the past is a measure of the extent to which we are still trying subconsciously to deal with experiences from our pasts – particularly the ways in which we were hurt, and in which we adapted to the repetition of this experience by giving up our power and losing awareness. More importantly with respect to the topic of this presentation, this tendency is also a measure of the extent to which we are actually free to design and implement a truly sustainable, just, and humane society.

Thus, unless we have healed (fully recovered) from these hurts, all our good efforts are subject to subconscious contamination with agendas that often involve a striving to get past unmet needs met in the present, an overemphasis on security and safety, and a tendency to do unto others what was done to us. I say this without judgement because this is a natural tendency. Indeed, my sense is that at every moment, every individual is always operating in the very best way he or she can, given the influences of the past and present environments; that is, people are innately good, not innately bad. It is particularly helpful to keep this in mind when interacting with people with whom we have significant disagreements. If their hurts are evident, it may be beneficial to consider how to support them in their recovery process. I believe that most of us have been significantly psychologically wounded as children and that the denial of this, and consequential lack of recovery, is the main barrier to our psychosocial development and to genuine progress towards sustainability. Let us examine the mechanisms involved in more detail.

The experience of being hurt, failure to fully recover, and adaptation to this experience, results in our psyches being split into two parts: an unhurt/healed part that can function effectively and be fully in the present, and a hurt/distressed part that does not function well, and that is still surreptitiously trying to get its

genuine needs from the past met – symbolically, in the present – a task that can never be achieved. This, incidentally, is why consumerism is such an entrenched part of our lives.

Perhaps the commonest way in which we automatically deal with our hurts is to lose memory of them, and so we deny them. This is why it is so difficult to enter into a discussion on this topic. Remember that often the person who hurt us was also the person on whom we depended for survival. So we denied the hurt and gave them another chance. The problem is that this adaptive process distorts our subsequent behaviour. One of the questions I always ask students in my pest control classes is "Were you ever treated as a pest as a child?" "How do you think that might have affected your attitude towards insects?" I believe that insects are a convenient target on which to act out whatever was done to us. Other associated outcomes are our subsequent lack of cooperation, hunger for power and control, and overemphasis on enemies who are perceived and treated as pests. In the recent war with Iraq, the American propaganda machine went to great lengths to portray Sad'dam Hussein as a pest, and all who followed him were pests by association. The solution to the problem then becomes the elimination of pests; note that the focus has shifted from ends to means.

Let us apply this thinking to the constitutional debate. What would happen if Quebecers and Albertans [or, in fact, any other group in conflict], instead of just focusing on and fighting for their own needs, asked how they could help the other group achieve their needs. Note the paradox. By taking this helping approach, I suspect that the needs of each group will be more likely to be met, whereas the adversarial approach (the child still trying to get its needs met) will satisfy neither. It is important that we become better at recognizing the difference between our two different selves, as well as the source of our present actions. Our unhurt healed self is characteristically spontaneous, fully alive in the present, able to respond to each unique situation in a new appropriate way, and possessing incredible potential for solving problems and acting in sustainable ways. In contrast, our hurt self is not spontaneous, exhibits highly patterned and predictable behaviour, is often irrational, oppressive of self and others, and commonly has numerous compulsive-addictive relationships (with food, possessions, sex, ideas, religion, work, exercise, pastimes, and so on). Only with this awareness will we be in a position to choose our course of action. In its absence we essentially function as automatons.

Our examination of psychology (which I will return to later), has taken us into several areas that are usually not considered in discussions of sustainability. This is an example of the extension of the boundaries that we normally place around a subject, and this is the subject I want to examine next.

Boundaries

The central message is that we have to look at more of the picture than we have in the past, both in time and space. We need to realize, for example, that everything we do has multiple outcomes, and everything that happens has multiple causes.

Scientific analysis, by limiting the variables under consideration, often provides a very limited view of reality. The need to broaden the range of our concerns was the central message of Aldo Leopold's land ethic, the extension of our sense of community to include the planet. In his words, "An ethic, ecologically, is merely a limitation on the freedom of action in the struggle for existence." First, ethics dealt with humans, the relation between individuals, and later with the relation between the individual and society. The land ethic simply enlarges the boundaries of the community to include soil, water, animals, future generations, and all the other things. Roderick Nash, in a paper entitled "Do rocks have rights?" continues this discussion and argues for the expansion of our ethics from being concerned just with the self to encompass all of the other living and non-living levels, right down (or up) to rocks.

We must recognize that the earth is our home and that the other organisms with which we share this planet are our extended family and community. Many people behave as if they have just arrived from another planet and are trying to beat this place into submission. Expanding the boundaries of perception requires that we look not just at the short-term, local, direct aspects of an issue, but through the mid-term, regional aspects, and single-stage indirect outcomes to the longer-term, global, multi-stage, multi-generational, more complex indirect relationships. If we are considering pesticides, for example, it is not sufficient just to

examine the immediate effects within the field – for the pollinators, applicators, natural controls, even for all of the beneficial organisms within the system – but also to consider the soil, air, and water (and things out of sight), the neighbours, the groundwater, the runoff, the accumulation up the food chain, as well as the effects on future generations: birth defects, cancer, mutation, development of resistance, farmer dependence, and so on. These are things that are invariably ignored in simple, naïve cost/benefit analyses.

The issue of boundaries comes into focus again when I try to define my mission within agriculture. I am working for food systems worldwide that are nourishing, socially just, humane, environmentally sustainable and economically viable. These are quite different goals than the maximization of productivity, profit and power, the P-3 trap that has been the root of so many of our troubles. Having scratched the surface of the topic of boundaries I now want to return to psychology and dig deeper into my thesis.

Psychology (2)

My argument is that if we are going to solve our global problems and do things differently on the planet, we have to do things differently within our organizations and institutions, and this can only be achieved by changing ourselves. This is probably one of the most important things happening through the Round Table process – not the production of reports and position papers, but the psycho-social development of the members and their enhanced ability to be powerful models for the rest of society.

Thus, my thesis is that there are now numerous interrelated local and global problems that have reached or are reaching crisis levels. They are caused by my species, including me, and they can only be solved by my species, including me. This requires that I change how I think, feel, and act; and the bottom line is that I can change. The corollary is that I cannot change anybody else, only myself.

A global crisis of great concern for me is the loss of species. We are presently losing between one and one hundred species each day, a loss that is occurring largely without recognition or fanfare. Today's newspaper, for example, contained nothing about the species that became extinct during the past 24 hours, let alone about the 3,000 that may have been lost during the past month. This is indicative of the inadequate feedback provided by our media. Extinction, one of the most dramatic things happening on our planet, apparently is not newsworthy. However, if those other species are unable to survive, it may not be long before we will also be subject to declining numbers and eventual extinction. There is nothing unique about us that make us immune to the laws of ecology. At the present rate of extinction, estimated to be 400 times the natural rate, 20 percent of all species will be gone by the end of this century, and a quarter of all plant families by the end of the next century. This is staggering. We are currently experiencing a level of loss of species that is greater than when the dinosaurs became extinct; all because of our ability to alter ecosystems.

Certainly this puts into question how intelligent and developed we really are – which is why I believe we must be willing to pay more attention to child development. Alice Miller has provided one of the clearest analyses of the situation. Her position is that the child is always innocent and that the child has all sorts of needs that are not commonly met. When these needs are not met, and when children are abused, they suffer lifelong effects; then society tends to blame the child and deny that it happened. This is the norm. This denial has made it possible to ignore the effects. The child has no choice when these things are not acknowledged but to repress the trauma and idealize the abuser. That eventually leads to neuroses, psychoses, and unsustainable behaviour. Miller concludes that the therapeutic process can only succeed if it is based on uncovering the truth about the person's childhood, instead of denying the reality. Some advocate other ways to deal with this situation, but it is rather like a balloon – you can push it in on one side and it may look as if the problem has disappeared, but it has merely been moved to the other side, out of sight for awhile. Although we have become quite proficient at making it look as if we can solve problems, in most cases, because we invariably do not deal with their root causes, we are merely relocating them in time and space.

To solve this we need to realize that children have intense needs, most of which are not recognized within our society. They also have intense feelings, and they often feel frustrated and afraid. When they express those feelings we commonly stop them, thinking that we have solved the problem. Paradoxically the way in

which we recover from our hurts is by expressing our feelings, not by suppressing them. When children cry, they are commonly jiggled, patted, tickled, fed and otherwise distracted. If they don't stop crying when being patted, we may subconsciously increase the frequency and the pressure. The child is not stupid. S/he figures, "If I don't stop crying the idiot's going to break my back!" So instead of the child healing from the hurt, s/he has no choice but to internalise the hurt, as a psychological scar. I encourage you to test this for yourself – pick up a child who is crying, hold him/her lovingly on your lap so that you can maintain eye contact (avoid pressing the child to you or looking worried). You will soon learn that the child knows exactly what s/he is doing. Every now and then s/he will stop and look at you; as if to say "Wow you're really paying attention, you know what I need and I've got some more crying to do!" Usually the child will stop and start, until s/he has fully recovered from the hurt. Babies often signal recovery by that wonderful "ga ga ga" sound as if nothing had happened. Unfortunately, I only learned all of this when my own children were in their teens.

R.D. Laing has described the development that most of us experienced very clearly. He notes that it is as if each of us were hypnotized twice: firstly into accepting pseudoreality as reality, and secondly into believing we were not hypnotized. This hypnotized condition also describes the voting population, including ourselves, and those involved in sustainable development. Unless parents make a conscious effort not to do so, their distress patterns (the internalised hurts from which they have not fully recovered) are automatically passed on from generation to generation. In our society, all such patterns are kept in place through rewards, punishments, controlled access to information, and so on. As a male, I was repeatedly reminded, particularly by sports instructors, that it was not manly to cry. Why do you think so many people bite their lips? This is likely to be evidence of their years of trying to keep it all in.

Sooner or later most children receive the message that they are not good enough, not acceptable, as they are. We commonly solve this puzzle by internalising an Olympic standard, based on the assumption that one has to be perfect to be acceptable. Could this be connected with our widespread obsession with cosmetically perfect fruits and vegetables and weed-free lawns? I can think of no logical reason why anyone would want to have a monoculture of grass around his or her home. But it does provide a false indication that everything is under control and that we have our lives in order; usually nothing could be further from the truth. [When I lived in Canada] I happened to have lots of dandelions, and was brought face-to-face with our distorted view of this unfortunate plant when a relative from a country that does not have dandelions came to visit. When we got up in the morning all the dandelions were blooming and he said, "Isn't it amazing?" I enquired what was so amazing, and he replied, "It must have taken you hours to plant all of those lovely yellow flowers. " How much of our lives are taken up with dandelion-type problems?

When children experience high physical and emotional stress and the healing process is interrupted, they have no choice but to internalise the hurt, and in the process they develop maladapted pattern behaviours, close off their awareness, feel confused, become disempowered, secretive, often lonely, afraid, and competitive, and commonly fear that there is not enough to go around. They become inflexible, and develop ethics and values that are compensatory. These often relate to controlling things, mainly because when they were children and needed to control their own agendas there were usually others around who were anxious to impose their agendas upon them. It may be valuable to take time to consider how this may have influenced our perception of sustainable development. The hurt person confuses wants and needs, thinks more is better, assumes they are innocent until they get caught, and that ownership gives freedom. Hurt people want to simplify everything so that it is easier for them to feel in control; they confuse symbols of power with real power, readily blame others, don't question "get the enemy" talk, and are attracted to magic-bullet curative solutions and technologies that claim to transcend natural limits. We particularly need to re-evaluate our biotechnology research programs in the light of these kinds of observations.

John Bradshaw is one of the more effective current popularisers of these ideas in North America, who also provides some guidelines for the process of healing these hurts. He pictures most adults as carrying around inside of them a child who still has not got his or her needs met. Much so-called adult behaviour is a thinly disguised and often-desperate effort to eventually get those needs of the child met, but it is all in vain because past unmet needs can only be mourned. When the next generation comes along, we even subconsciously try to get our needs met from the new child. We demand of them to love your mother, love

your father. The child, however, needs to have parents who are strong enough not to place those sorts of demands on them. They naturally would love their parents, but not on demand. I believe that this relates to the widespread drive for unlimited growth and the associated addiction to resource consumption. Many of our policies and processes have been designed to guarantee access to those resources, particularly our foreign policy. We are not beyond going to war to ensure access, and we are commonly blind to the causes and effects of these behaviours.

Conversely, children who experience low physical and emotional stress and are supported in the healing process, are able to keep their attention fully in the present, are keenly aware of their environment and of what is going on within their bodies, and they are able to think clearly and act responsibly. They can make commitments, be supportive, distinguish needs from wants, be ethical, deal with complexity, treat the causes of problems rather than the symptoms, and accept natural limits.

In relation to ethics, my psychological argument is that truly ethical behaviour originates wholly from the healthy, unhurt, undistressed parts of individuals; and that unethical behaviour originates from the hurt parts. My thesis is that if we want people to behave ethically, then we must provide environments that are supportive of the healthy parts of individuals. If we want to understand why people behave in unethical ways, we need to ask what was there in the past environment, and what is there in the present environment, that makes it so difficult for that person to behave in an ethical way. I believe that individuals involved in social change (and that includes all of us here, especially those who regard themselves as environmentalists) have to free themselves from their distress patterns to be effective. Note that environmentalists commonly use government and industry as surrogate parents, as targets for their anger, and the extent to which they do that is also the extent to which they are sabotaging the very agendas that they claim to be working for. The need for psychological healing is as great for environmentalists as for the members of any other group within society. There is no 'clean and clear' community. Denial of this and failure to recover ensures that all efforts are subject to contamination, the result being the perpetuation of the very things that one is trying to change.

The short-term solution to ensuring that we make ethical decisions is to make every effort to consciously make them from our healthy selves, but in the longer term it is much more enjoyable to do this by taking time to recover from our hurts. It should be noted that this latter approach is further complicated by some of our hurts being subconscious.

Thus, from within the unhurt or healed self, we can distinguish between conscious benign behaviour, such as caring for children, and subconscious behaviour such as selfless anonymous acts; and from within our hurt selves we can distinguish between bad habits of which we are conscious, and prejudices, biases, and negative patterns of behaviour of which we may not be conscious.

Although most professionals have codes of ethics, only some of the statements appear to be authored by healthy selves. Some codes overemphasize means and may not even mention ends, goals and accountability; transgressions are usually dealt with by means of penalties rather than supports; and most codes include contradictory statements. Much emphasis is usually placed on membership within the professional society and the exclusion of competitors from the marketplace. There is often very little emphasis on competence or the maintenance of competence. Most codes stress responsibility to the employer and the client, but not to the planet and to future generations.

Our hurt and healthy selves also create different definitions of, and plans for, sustainable development. I refer to these two approaches respectively as shallow and deep sustainability, fiddling with the fine-tuning of the *status quo* on the one hand, and fundamental paradigm shifts on the other. Whereas the hurt self tries desperately to make the system work, maintaining the existing distribution of power, and taking few risks, the healthy self is working to support the evolution of a system that can really work, even if it means radical change.

Achieving genuine sustainability commonly involves passing through two shallow stages – efficiency and substitution – before reaching the deep stage of redesign/design. The problem with the efficiency and

substitution stages is that they do not deal with the causes of problems. This is particularly evident within the field of pest control. One can apply a pesticide efficiently or substitute a biological control, but pests do not occur because of a deficiency of curative interventions, however benign they may be. Pests occur because of problems in the design and management of the productive system. The solution is to design the pest out of the system. Thus, in agriculture we can recognize an evolutionary progression from integrated fertilizer and pesticide management, to the use of biological and alternative inputs, to in-situ methods of pest control and soil fertility maintenance. This brings me to the broader issue of human evolution.

Evolution

I believe that our poor understanding of ecological and psychological processes, the abundance of misinformation and limited access to correct information, and the tendency to have only short-term visions have limited our psychosocial evolution. Conversely, we make progress when we establish goals that do not sabotage our relationship with the planet; when we act on those goals with the aim of maintaining ecological balance; and when we are paying attention to what happens and modify our goals accordingly. Currently our progress is being hampered by our tendency to ignore and deny the feedback from our actions. Indicators that we are on the wrong track include ozone depletion, exhaustion of non-renewable resources, global warming, desertification, species extinction, farm bankruptcies, dependency on subsidies and unstable world markets, malnourishment, stress, diseases, and so on.

The historic response to crises has been denial, blaming others, distraction, and reliance on curative and symbolic solutions. It is incredible, for example, that certain agreements concerning the environment could not be reached in Rio just because it was an election year in the USA. Rarely have the causes of problems been identified and the responsibilities acknowledged. What we need is immediate, appropriate action and the replacement of unsustainable practices by sustainable ones, not endless studies and discussions, both of which are often used to postpone action. It is time for us to realize that we have already seriously degraded our habitat (our home); it is imperative that we develop behaviours that conserve both the planet's natural capital and our species' cultural capital. Is current neo-classical economics the right tool to enable us to maintain the necessary appropriate behaviour? I would argue that only healthy selves and their ensuing ethics could provide adequate regulatory tools to guide our course of action.

We also need to realize that the environment, the planet and its ecosystems have absolute requirements. Culture and society have relative requirements. Economics and money have no requirements. Economics is merely a tool that can be used to implement our values. When it becomes something that is regarded as an absolute then we're in trouble. As money becomes the master, we become the slave – a sad situation indeed. We must distinguish needs from greeds; recognize that our population must be regulated and kept below the carrying capacity; we must manage renewable resources so that they can remain renewable; conserve non-renewable resources; and keep environmental impact below the ability of the systems involved to recover. This involves taking stock of the physical, chemical, bio-ecological, and socio-cultural systems available to us and identifying what is needed to meet our sustainable goals; assembling the bits and pieces, building them up where they have been degraded; and maintaining them. This is what is involved in true sustainable development. I will end by saying a few words about implementation.

Implementation

Firstly, we desperately need better indicators of health within both ecosystems and human systems. Biodiversity is a valuable indicator, about which we are bound to hear much more as time progresses. In particular, we need reliable indicators of change from sustainable to unsustainable conditions. We need to identify (1) the things that are driving forces for sustainability and find ways to strengthen and add to them; and (2) the barriers to sustainability and ways to weaken and remove them. In particular we need to identify what each of us can do to help bring about the necessary transformation of our society. To do this, we must have direction: know where we want to go; take action: know what it is we should be doing to achieve our goals; and have an appropriate regulatory system to make sure that we stay on course.

Seven directives for thinking clearly about sustainability are as follows:

- 1) Get some useful models for thinking clearly about the subject, asking appropriate questions, analysing issues, and providing common-sense answers. The models that we have been using up to now have failed us continually.
- 2) Go to the roots of problems and do full cost accounting; ask what the underlying causes are and consider the outcomes.
- 3) Project all outcomes into future generations.
- 4) Include philosophy and history of science, politics and social change, psychology and human development in all of our educational programs.
- 5) Keep paradox in mind.
- 6) Clarify your own personal mission and make a commitment to it. Find allies and resources and get started; think about your mission in the context of no psychological limits; reach out and be an ally to others with complementary missions; and don't waste time defending ideas that you are not committed to and about which you have insufficient data to take a position. So many people do things that they do not believe in because they feel they have to do it to stay employed. It is a sad situation when we cannot follow our mission.
- 7) Make every effort to think and act from your healthy self.

We need to know that we have a healthy self and that there are driving forces for solving local and global problems. For instance, part of all of us is concerned with getting all the information. We all have a built in 'garbage detector' that is able to recognize misinformation. We have a natural love and caring for our children, for one another, and for future generations and the environment. All of this is inside us now, we just need to enable it to express itself. We all have a deep striving to be moral, just, and responsible. We are independent and unwilling for others to make inappropriate decisions on our behalf.

As Lao Tsu suggested in 300 B.C., we should treat everyone as if they were wounded, and acknowledge that they are doing the best they can; know that they would benefit from your support (consider especially anonymous support) in their recovery process, and that they are in a process of "evolving" to a higher state of being. Similarly, we could try treating every ecosystem as if it were damaged and in need of our support in its recovery process, and in a process of evolution to a higher ecological configuration.

In my own field of agriculture, we have placed too much emphasis on solving problems, to the detriment of knowing how to deal with whole systems; and we certainly have not paid much attention to the individual, psychosocial level within the system. Consequently great opportunities for development can be realized by looking at whole systems, and working at the individual level, with curative problem solving being relegated to a last resort. We need to support a shift from approaches based on inputs and single, simple, technocentric solutions to more preventive design and management strategies based on multi-faceted, bio-ecological, indirect knowledge and skill-intensive approaches. The barriers and limiting factors that must be overcome in the achievement of sustainability include information, skills, appropriate technologies, and institutional supports – these are the barriers that we usually focus on – but I believe that the following are more important barriers: vision, awareness, empowerment, and values. Those are the things that are really holding us back.

If we are to effect real change, it is essential that we change our attitudes and values; and recognize that the earth is our home and that we are part of the natural system.

For this to happen, we each require:

- * to recover from our hurts (empowerment),
- * a high level of awareness,
- * the ability to act in the present rather than the past,
- * a clear vision of a benign world of which we are part,
- * appropriate information, skills and technologies,
- * institutional supports (products, services, education, models, research and legislation), and
- * an evolving system of higher values.

Personal action can begin immediately. My own list of directives to myself includes the following:

- * heal your hurts,
- * obtain correct information,
- * interrupt and correct misinformation,
- * give up and interrupt oppression (self, others, environment),
- * set goals, make commitments,
- * seek allies, cooperate, collaborate, and
- * act on rational thinking and gut feelings (as opposed to superficial feelings).

Thank you for allowing me to share this thinking with you. I will be interested to hear your thinking on these issues, and I look forward to being allies to one another in our unique yet complementary missions.

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Professor Stuart B. Hill is now Foundation Chair of Social Ecology, School of Education (includes previous School of Social Ecology and Lifelong Learning), University of Western Sydney (Kingswood Campus), Locked Bag 1797, PENRITH SOUTH DC NSW 1797, AUSTRALIA

Location: Building J, Room JG-16, UWS-Kingswood, Penrith, NSW - Phone: 61(0)2-4736-0799; Fax: -0400: email: s.hill@uws.edu.au

Many pre-1993 publications at: www.eap.mcgill.ca

His latest books are **Ecological Pioneers: A Social History of Australian Ecological Thought and Action** (with Dr Martin Mulligan; Cambridge UP, 2001) and **Learning for Sustainable Living: Psychology of Ecological Transformation** (with Dr Werner Sattmann-Frese; Lulu, 2008).

Available at: <http://www.beliefinstitute.com/article/ethics-sustainability-and-healing>