Design and Sustainability:
An Interview with Michael Ben-Eli

Russ Volckmann

Russ: *Welcome Michael Ben-Eli, it's a wonderful opportunity to speak with you. I'm hoping that we can explore some really interesting areas, and given your background, I doubt that will be a problem.*

To begin with, I want to talk about your background in design. Is it primarily in architectural design? And how has that been a part of your life?

Michael: I've been fascinated since childhood with buildings. I went to study architecture and urban planning at the Architectural Association in London during the sixties, at that time, a preeminent place in the world. It was a very avant-garde and progressive school. A lot of really fascinating people were there focusing on all questions of urban planning, buildings and everything that revolves around architecture.

Russ: *When you talk about addressing all the problems and challenges of city planning and architecture, are you speaking of that with essentially an engineering perspective on design? One that is primarily concerned with the technology—is that what you meant?*

Michael: If you look in retrospect there were two different main areas of emphasis. One was technology, more technology in general than engineering. In England especially, there were futuristic groups trying to translate into architectural visions possibilities that were opened up by the world of technology. The new technology of space exploration, for example, had a huge influence on what could be done with building design both in terms of visual impacts and actual structural possibilities. Designers were grasping for the outer reaches of technology—how those would impact both on urban planning and individual structures. The latter were increasingly conceived as large mega-structures made possible by new materials and other technologies.

At the same time, there was a growing emphasis among urban planners on social issues as an integral part of physical planning. There was the realization that there were a lot of important "soft" questions and socio-economic forces at play shaping urban environments, all of which had to be understood and taken into account in effective design. Such issues would relate, for example, to different income groups, different needs and functions, and the integration of people, spaces and functions in a comprehensive design. England, at the time, was very advanced in those ideas. A great deal of pioneering work was done on these issues starting from the years immediately after the war—I'm not quite sure who's in the lead today in that field, but at that time, many of the show-case model projects, were developed in the UK.

Russ: *You're speaking of model projects both of city planning as well as building design?*

Michael: Yes. This is probably because when you look at the urban field, some of the best English architects and planners were actually employed by local authorities. At the time, the Greater London Council and some other organizations like it were in charge of urban planning addressing large scale issues of transportation, new housing projects and the like. They were all public sector entities. They were not private offices. Some of the best people in England were employed by those organizations that provided unique opportunities for real creativity, quite an unusual thing for government organizations.

Russ: What opportunities did it create for you?

Michael: I was a student at the time, so I was not participating in actually solving real problems, but London at the time—and the AA in particular—was a hotbed for new ideas. The AA was basically a club. It was a school that was operated by the British Architectural Association. At the heart of the school were a restaurant and a bar. Many of the architectural offices tended to aggregate in that area, near the British Museum. Architects and planners from those offices would all come to the AA twice a day—first for lunch, and then for drinks after work—and these were the moments where a lot was happening in terms of open discussions, brainstorming and plain networking. There was a lot of excitement. It also meant that anyone who was anyone in the architectural world who was passing through London would somehow end up at the AA. These visitors would have an opportunity to lecture and chat informally with the students. It was a unique and creative environment—that's where I met Fuller and some other leaders in the field.

Russ: You met Buckminster Fuller there. Can you tell us about that?

Michael: In the mid-sixties, Fuller was advocating an incredible program. In retrospect, it was one of those typical Fuller ideas—naïve and completely impossible, but absolutely correct. It was a program he called the World Design Science Decade: Ten Years of Design initiative, where all the architectural schools in the world would collaborate in a ten-year program that would focus, in five two-year increments on redesigning the world— dealing with issues of human trends and needs, energy, natural resources management, pollution, the environment, the whole industrial infrastructure—all the issues that have now become so pressing from the viewpoint of sustainability.
Fuller gave a lecture in London about the program and I had never heard anything quite like it. I was completely awe struck and fascinated by his vision, so along with some others at the AA, I joined in the program and started working on it. Much of my subsequent time at the AA was dedicated to this effort. I was also involved with a lot of experiments in designing geodesic domes and various space structures, trying different materials—anything from bamboo to aluminum, corrugated cardboard and Ferro-cement, things of this nature.

Russ: Is there any one project or effort that is memorable to you?

Michael: One very unusual project comes to mind that requires a bit of an introduction. The British educational authorities—the bodies that are in charge of granting degrees and so on—were actually in charge of University education in Ghana, a former British colony.

In particular, the Royal Institute of British Architects was in charge of supervising degree granting at an architectural school that was established in Kumasi at what was at the time known as the Kwame Nkrumah University of Science and Technology. John Lloyd who was a Year Master at the AA was asked to take over that school and run it. He was a big Fuller fan, so his idea was to go to Ghana and reorient the school—develop a new curriculum that would reflect a lot of Fuller's design philosophy, including a focus on the World Design Science Decade program. Although I was only a second-year student, he invited me to come to Ghana—I was quite close with Fuller by that time—along with Keith Critchlow, who was teaching at the AA, to work with him and Fuller on redesign of the curriculum of the school.

So we went to Africa for a year and worked on trying to reorient that school and focusing its approach around Fuller's ideas. That was also a time during which Keith Critchlow and I had a great opportunity to do a lot of research in Fuller geometry and tried different types of structures. We did some very nice aluminum and bamboo geodesic domes in Africa. We were experimenting with a lot of local materials. Aluminum was one of them, because Ghana had a great deal of bauxite sources. So, we tried to use aluminum as one possible building material. These were basically experiments with geodesic structures. Of course, Keith went on to become a preeminent authority on geometry and architecture and his work was very much influenced by Bucky's synergetic geometry.

Much of the rest of the years at the AA involved the sort of normal design project that you get in school, but also a great deal of work on designing some of the events that related to the World Design Science Decade program as advocated by Fuller.

Russ: *Were you involved with Buckminster Fuller in other ways?*

Michael: The school actually allowed me out of regular schoolwork in order to have this basically "apprentice" opportunity with Fuller. Hence, it was possible to spend the year in Africa and otherwise focus on the work of the World Design Science Decade for the five years that I was at the AA. The basic understanding was that I would also do all the other stuff that my peers had to do, like exams and projects. I lived a double life in a way, but it was fascinating and very energizing.

Russ: *It sounds really exciting. Where did it take you from there?*

Michael: Oddly enough it took me away from architecture. I graduated from the AA, but largely because of Fuller's influence I realized I would not end up in architectural design. I became fascinated with the issues that were raised by his vision concerning the management of world resources and the environment. I started to move in that direction and look for additional tools that would make me more effective in dealing with those questions.

I felt at the time that the emerging fields of General System Theory and Cybernetics offered such new ways of thinking, a new conceptual framework, a new language,

essentially—new in the sense of creating new tools for dealing with complexity and understanding the nature of complex systems, how complex systems regulate themselves, how they change, adapt and evolve. So when I graduated, Fuller invited me to join his staff here in the United States. While working with him on some projects, including a very interesting project with members of some street gangs in New York, I started commuting back to London to work on a Doctorate in Cybernetics with Gordon Pask. That took me to a more abstract notion that is interesting as it relates to your question about design. I started dealing with a more abstract form of design—the design of organizations and the "architecture" of institutions, organizations and management processes.

Russ: *So your attention expanded from the physical design dimension to human system design?*

Michael: Yes, completely correct.

Russ: *How did you proceed with that in your career?*

Michael: In 1973 when I left Fuller's entourage, I got married and was offered a project to work on in another country. So I left the United States for a while. I was just finishing my Ph.D. then and I basically set myself up as a management consultant. I was very lucky from the outset in that I received some very challenging and large projects that allowed me to experiment with all these ideas—both the fundamental intention that is imminent in Fuller's philosophy and his design approach, but also experimenting with all the ideas from general systems and cybernetics. I was increasingly focusing on the ways large systems function and on their essential architecture.

Russ: *What might be an example of one of those types of projects?*

Michael: For example, in the early years I did a lot of very large strategic planning projects in health care in some of the key academic medical centers in and around New York. All of these involved designing the process of planning, itself. This is something that is rarely done deliberately, as it should. People jump into planning activities without understanding that the planning process itself requires an entire infrastructure of its own in order to succeed. Some of those projects also included major reorganization efforts, which meant having to deal with the architecture of those institutions. The design of their internal structure needed to be addressed and there were fascinating issues involved. Remember, the typical medical center comprises a number of very different functions under one roof. It has a hospital, for example, something that people can look at from a more conventional business point of view, more like an industrial operation, where you can measure things like patients per day, length of stay, level and intensity of care, and the like. Then, you've got the medical school, basically a university with all the teaching and pure research components. These are three functions—patient care, teaching and research—which require different management approaches, yet need to be integrated in one whole system. This makes these organizations especially interesting —more complex

than the typical business enterprise of a similar size. They were very interesting times as I attempted to get my feet wet in institutional design in those environments.\

I expanded from there into other arenas until 10-15 years later I was called into projects that were dealing more with regional management and planning issues. For example, in the Great Lakes area there was a planning project that brought many of the issues raised by Fuller, issues of environment, resources, technology, economy, society and so on, in one effort. In all of these kind of projects, I think my contribution was to bring the system perspective, both in the design of the approach to a problem as well as in actually carrying it out.

Russ: Are there some key principles around the design of the approach that you could identify?

Michael: There are a few that come to mind. One is the systems approach, which means a comprehensive view of problems that takes into consideration a larger domain of concern. It tries to understand what are the key elements, the key variables, in that domain, how they interact and what are the consequences of those interactions. Taking a system view to what are essentially systems is essential—we normally deal with complexity by trying to simplify it often to the point of trivialization. We take a typical system issue and we trivialize it by trying to make it as simple as possible by reducing it to handle-able components. By the time we do that we tend to loose the whole system essence, ending up treating a complex system as though it was a simple clockwork mechanism. We then are surprised that many of the results of such an approach don't work well. So, one important thing is the comprehensive system approach.

Another important aspect is one that has been given different names. Its significance was emphasized by Fuller, but by other thinkers as well, notably by Russ Ackoff, for example. He called it "Ideal Design." Fuller referred to it as "preferred states," that is, the requirement not to focus on the limitation of a problem, but rather to project yourself to the ideal situation that you wish to achieve and then work backwards to achieve it.

Russ: Can you give an example of how that works?

Michael: One example would be how you deal with the energy issue. You could approach it by saying, "We are burning fossil fuels. This is creating greenhouse gases in the atmosphere that have impact on climate change. How to solve it?" You proceed to focus on the solution on how to ameliorate what is going on now. Then you can come up with all kinds of arguments about whether to reduce emissions by 5% or other solutions, short term, limited solutions that are typical to the way the international community has been trying to deal with the problem. Or, conversely, you can take a completely different approach and say, "What we need here is a global planetary energy independence, which means graduating to a source of energy that is non-depletable, must have zero harmful emissions and be available to all." Then the problem you have to solve is of a completely different nature. Do you see the difference?

Russ: In the latter, you're starting with your goal or vision. Then you look at the activities that would be required to create that.

Michael: Exactly! There's a big difference if you start with an aspiration, something you would like to achieve, even if for the moment you don't even know how, as distinct from starting with a current "problem." You can fix the faucet, but you'll still have the same water supply, whereas if you take that problem instance as an opportunity to consider what the best thing would be for everyone, it's a completely different question.

So that is the system approach and ideal design. It's so important, because it is essential to addressing the challenge that humanity faces on the planet today. You can talk about how to eliminate poverty or hunger or how to create a future where all of humanity can live and experience different degrees of wellbeing altogether, and then determine what will be necessary for that. Then you can talk about what we need: clean renewable sources of energy, clean, reliable, water supply, all these things in a qualitative sense, first. Then you go on to explore what would be required in order to achieve that, including the technology, institutional redesign and removing of the obstacles that are in the way. If you start with the problem, you'll never get there.

Russ: As I listen to you, your passion for addressing the issues of sustainability is palpable. I'm aware that is an arena where you have been investing a great deal of your energy.

Michael: It started, with Fuller's inspiration, to understand that those issues exist. I never had any sense of those issues when I started school. I was thinking about architecture like Frank Lloyd Wright—building and so on. Fuller opened my eyes to a completely different way of looking at the world and the kinds of issues that are important. Over the years, I think that I've tried to intuitively assemble the experiences and the tools that will make one more effective in understanding and dealing with those issues. For a few years now, I have been feeling increasingly confident that I completed my basic training. That I graduated from my own university, if you will, and that I am ready to focus on these issues trying to affect real change. That's where the idea first came to develop the Sustainability Principles and to launch the Sustainability Laboratory.

Russ: I'm aware that you've spoken about sustainability principles. The last I've heard there are five of those. Is that correct?

Michael: Yes. The origin of that is when I began to play with the idea of establishing the Sustainability Laboratory. I was wondering what would make it different than many other centers or institutes for sustainability that currently exist. One thing that I thought was missing was a set of coherent principles that define the true meaning of sustainability, as a state. What are the absolutely essential elements, the minimum statements that you can make regarding sustainability, the required conditions without which it can't be fulfilled no matter how you play with words. If you want to construct a vehicle so you can fly, you had first better understand the principles of aerodynamics. Similarly, if we are serious about implementing the state of sustainability as the universal planetary state, what are the underlying principles that need to be upheld?

I pondered that for a long time and I spent about two years drafting my ideas. I was very unsatisfied with the currently prevailing definition of sustainability, basically the one that was offered by United Nations' report associated with the Bruntland Commission, a definition that is accepted by most. So, I tried to give the concept a more precise definition and then derive the principles from that.

Sustainability:

A dynamic equilibrium in the processes of interaction between a population and the carrying capacity of an environment such, that the population develops to express its full potential without producing irreversible adverse effects on the carrying capacity of the environment upon which it depends.

Sustainability Principles

The First Principle:
Contain entropy and ensure that the flow of resources, through and within the economy, is as nearly non-declining as is permitted by physical laws.

The Second Principle:
Adopt an appropriate accounting system, fully aligned with the planet's ecological processes and reflecting true, comprehensive biospheric pricing to guide the economy.

The Third Principle:
Ensure that the essential diversity of all forms of life in the Biosphere is maintained.

The Fourth Principle:
Maximize degrees of freedom and potential self-realization of all humans without any individual or group, adversely affecting others.

The Fifth Principle:
Recognize the seamless, dynamic continuum
Of mystery, wisdom, love, energy, and matter
That links the outer reaches of the cosmos
With our solar system, our planet and its biosphere
Including all humans, with our internal metabolic systems
And their externalized technology extensions --
Embody this recognition in a universal ethics
For guiding human actions

The five principles pertain to the five different levels or domains, almost like chakras, that are important to pay attention to. On one extreme you have the physical domain that deals with issues of energy and matter, all the "stuff." The second principle deals with the economic domain in the sense of the meaning and creation of wealth. The third domain deals with the principle of life. We are part of a larger, living fabric called the Biosphere

and we have to behave as good neighbors to other species. The fourth is the social domain that deals with the guidelines for social behavior. The fifth, which is probably the most critical, is the spiritual domain that really provides the value orientation to everything else that you're doing.

It's interesting—in the beginning I only had the first four domains and I felt that something was missing. I was beginning to play with the value or spiritual dimension. Many people that I talked to in trying out those ideas were discouraging this. "If you want leaders in government and business to take you seriously," they would say, "you cannot talk about spirituality." It didn't take long for me to realize that without the spiritual domain the others are just techniques. It is really the spiritual orientation, the underlying value held, which coheres and ties everything together. It serves as a center of gravity for the other four domains, for all of the rest.

That's how those five principles developed and began to spread on the Internet and so forth. Certainly they've been the guiding principles for the work I do and for much of what the Lab is and will be doing. The important thing about those five principles is that they are not single separate things. The five constitute the dimensions of one coherent system. What we tend to do many times is try and focus on problems in one area, not the others. Some people think we need to solve some technology problems and everything will be all right, but if we have a predatory orientation toward the world, that's how you will use your technology. Going to the other extreme, some believe we need everyone to become spiritual and sit and meditate. That, of course, will not take you too far if you don't also have the physical infrastructure to sustain the 9 billion people we are soon to have on the planet. You really need all five principles to cohere and create one system, and that's the biggest challenge of the sustainability transformation. You cannot deal with it in pieces—you have to deal with it as one whole system that is manifested in those five dimensions.

Russ: *In recent months, I've been feeling a little dissatisfied with the concept of sustainability and have been playing around with the notion of "thriving" as opposed to sustainability, because it suggests something more of the evolutionary potential that may be involved here.*

Michael: I also have been very unhappy with the term, especially because it's been so misused that it's almost lost its meaning. I haven't found a better term, so what I did instead is adopt that term but give it my own definition.

Russ: *How are you working in the world around the extension of these sustainability principles?*

Michael: At the moment, I'm working essentially on two levels. One is educational where I do quite a bit of speaking to all kind of audiences. I try to spend as much time as I can with young audiences—university students in different countries mostly. On another level I try to do actual projects. Currently, I am working on a fascinating project in the Negev Desert, in Israel, with a group of local Bedouins. We are creating an actual model of a

sustainable desert community, which will be based on the Bedouin tradition and expertise with desert agriculture, but leveraged with the most advanced technology in solar energy, water treatments, silvipasture, and the like. At the end, we'll have an integrated desert, organic farming operation with livestock, medicinal plants and authentic, native vegetables. The whole site will be designed to deliver zero harmful emissions and every function on the site will be linked, providing an input, to another function, so there will be very little waste. It will be integrated from a sustainability point of view. The social dimension of the sustainability principles will be embodied in the way that the community will be organized. The group is developing a cooperative structure that is very innovative, and completely unique in the context of governance in the Bedouin society, which tends to be male dominated, hierarchical, tribal and clannish.

Russ: *Have you examined adult developmental psychology at all? Any of the models such as the work of Michael Commons, Robert Kegan or Don Beck and Chris Cowan on Spiral Dynamics?*

Michael: No, I must confess that psychology is an area I'm especially weak in. I've read things through the years but that has not been my focus.

Russ: *The reason I ask is because of the way in which you are addressing the social. Particularly in the case of Spiral Dynamics, there is material on my Web site and a book entitled Spiral Dynamics. I would encourage you to take a look at it as a way of tapping into a framework that may give you some important insights in that arena.*

Michael: I'll look into that. Incidentally, I don't know if you had a chance to look at the Design Science document I developed, which was published on the web site of the Buckminster Fuller Institute. You can see there how the spiral has been used as an imaging icon for the process of design.

Russ: *Yes, I recall that. Could you elaborate on that? How is the spiral representative of the process of design?*

Michael: You need to accept a definition of design that goes beyond the conventional view of design as having to do with an arrangement of objects or what-have-you. Normally, we use the term "design" in a very narrow way. I think there's the possibility to look at design in a much broader sense as a concept that indicates some sort of underlying order. You start with that, a notion that means some whole that is marked by a consistent coherence, which of course, implies some deliberate intelligence. Fuller, for example, used to say that the whole universe is a fantastic piece of design. This is how he used the term. So "design" is basically given the connotation of an underlying orderliness.

If you think of one of the unique and important functions of human intelligence in the cosmos, it is to produce unique designs and act as a local cosmic feedback loop in the process. This is the opportunity that we have with our awareness, consciousness and intelligence. It is to progressively create more order, although often we do not act that way. Arranging and rearranging events in comprehensively preferred ways demonstrates

the potential of the fantastic capability that we all possess as universal designers. So when you look at it from this point of view, you can come to a new definition of design. You can define design, in the most general sense, as being the process of realizing intention. The process itself has to do with applying intelligence to physical processes and it comprises a number of steps ranging from an intention to actually realizing that intention.

You start with an intention and then there is an action to reduce that intention to practice. There is a process that moves from the intention to the realization. If you think about that process a little bit, it would have the typical structure of purposeful behavior in general. This is where there exists an important link with psychology, where the intention obviously corresponds to a goal and the later corresponds with projecting ahead a preferred state, as we talked earlier. So you have got the goal, you have got the realization process, the activities required for realizing the goal, and then, you have the process of evaluation, which is the feedback function where you see whether you achieve the goal or not and whether you have to continue and try to realize it or you can move your attention to something else.

So you have got the three major aspects of intention, realization and evaluation, which are linked in a circular framework. But you have to be able to evolve. So you have to be able to break free from this circle. In order to jump out of it, once the circle is complete, you need to connect to a new more comprehensive, more inclusive intention and you move to the next circle level. That's what creates the spiral. In relation to each circle level, which comprises a typical feedback loop situation including intention, realization and evaluation, you need to be able to accommodate the possibility of learning, adaptation, and the kind of shifts that are involved in evolutionary expansion of context.

This requires that each such circle—each closure—will be opened up to the next more comprehensive cycle of integration. If you take the circle and open it up to the next circle and the next one, you'll get a spiral. A spiral is an entity that expands. It can be used as an iconic representation of evolution. Evolution, whether biological, social, cognitive or whatever, comprises basically an expanding process. If you contemplate it further, you might say that what is actually expanding in the spiral is a quality we call "experience." It's the experience of the cosmos itself that is becoming more comprehensive as we go through those cycles.

Russ: *And it's probably replicable at multiple levels. You indicated experience with the cosmos, but the individual and the social systems can go through those same kinds of dynamics.*

Michael: Absolutely! But in the same breath I'm also saying that the individual and the individual's design—the individual's invention and social design—are part of the cosmic experience itself. We think that it's our experience, that it is all about us, as humans, but it is not. It's something greater that is working out its purpose. It accumulates its experience through all the possible manifestations including us, our thought, feelings and actions.

Russ: Fascinating. I'm wondering if in your work on sustainability whether you see yourself engaged in a political process. I'm assuming the answer is yes, and if so, how?

Michael: I have avoided the political process, and no, I don't intend to engage in it. The main reason for this is that the political process requires a tremendous amount of compromise. I think that in order to understand what the issues really are, and how best to approach them, you need to avoid compromise as much as you can. I prefer to work in this way.

Russ: It occurs to me that one of the other arenas in your life has been attention to issues of peace. Can you expand on that?

Michael: I think of peace more of a derived consequence of many conditions rather than a result only of deliberate activist focus. I was born and grew up in Israel, so my whole early experience has been an experience of a region that is torn by conflict. Having lived outside of it for many years now, I can also see the potentials very clearly, of what things could be if energies could be diverted from conflict to more creative modes of being. Over the years, I became involved in some peace efforts. I served on the board and for a while as its chairman, of an organization called Givat Haviva, which brings together Israeli Arab and Jewish youth just so they can experience each other more directly and get away from stereotypical ways of thinking about each other. It's very important work, but very slow, and really a drop in the bucket.

The project that we are doing now could have an important impact on government policy with respect to the Bedouin minority in the Negev. One of the ideas we are discussing is expanding that project and doing something collaboratively with a group of Bedouins in Jordan. If you start that, you can clearly expand very effectively on issues of peaceful existence between the two countries. In all of this, though, I am trying to create peace conditions through concentration on something else. We are not involved in peace demonstrations in the project, but we are trying to create a thriving community in a way that can demonstrate that there's really no need for destructive conflict if you collaborate. Incidentally, with the Bedouin project, the kind of coalition of people in organizations that we were able to put together is absolutely unprecedented. It shows you that when a group of people really wants to focus on an ideal and sincerely try to achieve it, anything can be possible—and that, can rarely, if ever, be achieved through conflict which is driven by fear. Of course, in relation to the five sustainability principles, I think that the fifth one viewed in relation to the social reality would see a condition of peace as a prerequisite for a thriving society and a happy, thriving future for many reasons.

Russ: It seems to me that the sustainability principles are really the domains of both design and social action.

Michael: Absolutely!

Russ: I said "social action," but I guess I mean just action. Period.

Michael: They are actually very powerful. I don't mean it as a self-serving statement, but the principles are very powerful if you think about them as guidelines for organizing action, for developing sensible policy or designing the necessary change.

Russ: Where do you see yourself moving at this time? In what domains will you be putting your energy?

Michael: The Bedouin Project is consuming a lot of energy and time. I shall continue with that to see it through, but I think I shall be switching my attention to the evolution of the Lab itself, as a vehicle to support activities like this one particular project.

Russ: Tell us about the Lab.

Michael: I started to work on issues of sustainability and sustainable development largely in the context of the multilateral organizations that deal with issues of development: organizations like some U.N. agencies, the World Bank and others. Both in that arena and in the private sector where some concepts of sustainability are being pursued, there are real limitations on how far existing institutions can go for a number of understandable reasons. It took me some time to fully appreciate that. I thought that I was operating at the center of activities furthering sustainable development until I realized that there was a huge gap between the prevailing rhetoric and what was actually happening on the ground.

It took me some time to realize that this was not because people are bad or they don't want to do the right thing, but because the whole framework within which we operate, both in the public and the private domains, is extremely restrictive in that sense. In the private sector, we operate under an economic accounting framework that is really driving us in the wrong direction by distorting reality enormously, for example, allowing us not to take into account what economists refer to as "externalities"—the impact of pollution, the impact of depletion and so forth, but even worse, allowing us, in many instances to count consumption as profit.

If you were a CEO and did this with your company's accounts, you would be put in prison, but that's how we operate the planet. We deplete the resources and think we are getting rich. That existing framework constrains what any CEO or any given company can do before they reach the very low ceiling of acceptability—of dealing with shareholders' value and all those familiar restrictions. In the multilateral arena, it's the political restrictions where you have to operate by consensus. The arguments around achieving a consensus go in a direction that takes you further away from the problem itself. By the time you reach the lowest common denominator of what is acceptable to all, you are dealing with a "solution" that is so far from the essence of the problem involved, that there is no correlation between the two anymore. This is why a lot of development policies have not been very successful.

It occurred to me after experiencing that world for a long time in projects all over the world that it would be very useful if there would be an independent entity that could

actually experiment with breakthrough approaches without worrying about the conventional frameworks of both the conventional economic and political varieties, and create a portfolio of success showcase models, demonstrating true paradigm shifts in different necessary arenas.

The lab will focus its work in four key areas: on questions of strategy —approaches to demonstrate sustainability in development, for example, on technology, financing and education. I am not trying to define what the lab will do through defining problem areas or specific development objectives, but rather by those four functional areas. In each of those, we would identify an issue that needs to be addressed, and bring the best possible talent and process to bear on creating and demonstrating a model approach that others can review, adopt and scale up. This is basically the idea behind developing a prototype sustainable desert community with the Bedouin's.

That's what the Lab will try to do. I hope it will attract some attention and collaboration with a number of cutting-edge institutions. At the moment we are working with two: one is the Blaustein Institutes for Desert Research of the Ben-Gurion University of the Negev in Israel where a great deal of cutting edge work is being done on solar energy, water management, desert agriculture, and so on, and with EARTH University in Costa Rica.

Russ: *If anyone wanted to learn more about your Lab, what is the URL for it?*

Michael: It's www.sustainabilityLabs.org.

Russ: *If there's an interest in becoming more involved in the work you're doing is there an avenue for that?*

Michael: All that needs to be done is to contact me directly at muben@aol.com, but there is also Lab contact information on our Web site.

Russ: *Michael, I deeply appreciate the opportunity to speak with you. I'm very impressed with your range of interests and energy and I am sure we could have a dozen more conversations in great depth. At least this has served as a foundation to get the key elements out there in front of a larger public that will pay attention.*

Michael: Russ, I very much appreciate the opportunity and I enjoyed talking with you.