

PATTERNS

From the Editor:

I've been wondering what we mean when we use the word "education." And what on earth does it mean when President Bush admonishes us to leave no child behind?

When we examine the origin of the word, "education," we find that it comes from the root "Educare" meaning "to draw out"—to bring forth from the young mind that which is hidden in order to make connections with the given world.

To be honest and historically correct we can't possibly equate "education" with "schooling" since that's the process of constantly "putting in" the socially perceived "necessary information" of the present age in order to maintain a viable civilization.

No wonder schools, world-wide, are falling apart. We don't have a viable civilization to maintain anymore.

No matter what the family orientation into which the child is born, children are influenced by patterns of nature. There is an inherent sense of integrity that is violated once schooling begins. Are there any of us who haven't felt in the process of "growing up" that things were "not fair" at one time or another? Hasn't our education really been to learn to accept "what is?" And the best students are those who are the best at accepting; those who are considered psychologically healthy and can learn to take advantage of what is.

Admittedly, this is a narrow, cynical view of the general pattern of present schooling. But increasingly, we see that schools that can produce more and more people who know how to take advantage of what are the accepted ways in a society are the ones supported with more funding because they provide the control necessary to maintain the social order. Those

(continued on next page)

Ranulph Glanville: A Conversation.

When I first met Ranulph Glanville at the American Society for Cybernetics 2005 Conference in Washington D.C. I was reminded of an essay of his published in the proceedings of the "No Guru-No Method?" conference held in Helsinki in 1997. In a modified version of that essay, titled 'Researching Design and Designing Research (1999)', I was drawn to his view of what I had intuitively felt was at the bottom of our present social predicament—that is, HOW to simplify. For example, we are faced with a complex situation in which we are destroying each other, to say nothing of destroying the natural environment on which we depend, and we simplify that situation by naming it the War on Terror.

In his essay, Glanville asks: "Why do we want to simplify? To make the "continuum" of our experience de-finite, handleable within limited (finite) resources. ...So strongly do we believe in such simplification that, when we find discrepancies, we explain them away as errors, rather than a demonstration that simplification necessarily omits something. By this device, we maintain our theories. Theory formalizes the significance and necessity of pattern. Pattern gives us objects and recognizable behaviors, allowing us to predict, and risk living by our predictions.

Prediction, he says, is a means for extending the range of our observations and the patterns we have constructed—of pre-forming our worlds. Living by the assertion that pattern X exists, and because X has always happened it will always happen, we extend the range of application of the pattern to become a prediction, taking control of the future as a result of which we pursue certain courses of action. Believing something is constant leads us to stop thinking about it: it becomes habit. For instance, if I have a route I regularly use, it forms (and severely limits) my actions, and I treat it as causative. An accident leads to confusion and loss of control. My chain of causes has been broken."

Today, I believe, we are living what we might call "an evolutionary accident" that may prompt us to understand a different way of thinking—a designerly way of thinking. So, in my rush of excitement at being able to talk with this man who has supervised research in the fields of Architecture, Cybernetics, Design, Conversation Theory, etc. at numerous Universities on almost every continent in the world, I began our conversation by asking him the proverbial mundane (and simple) question. "Just what is it that you do?"

Barbara Vogl, Editor

Barbara: I have always seen you as an itinerant intellectual who is championing a different way of creating our world, someone most needed in today's world. Just what is it that you do?

Ranulph: I help people develop research, particularly in the area of design. The problem with research and design is that there is no tradition for it. So, some people don't want research at all, others want to pretend that what they are doing is research (because you can earn money from it). Others are confused and so what they do is they take the worst, hardest cartoon of scientific

(continued on next page)

Inside

Ranulph Glanville: A Conversation	1
From the Editor	1
The Road Never Traveled.....	5
Book Review.....	8
Learning to Be Evolution.....	9
Stafford Beer	12
American Society for Cybernetics.....	12
In Memory: Doreen and Leo Steg	13
Humberto Maturana.....	13
True Power	14
U.S. Department of Peace.....	14

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schools that produce more people who act out the perception of unfairness, those who don't fit in, provide the potential for the increase in spending for the control industry of prisons. It is not such a wide stretch of the imagination to connect the expenditures for these institutions of control within our national boundaries with the increased expenditures for other institutions of control—those of the War Department and the Pentagon. Today, more and more of us are aware that this is done in the name of maintaining a civilization that is no longer sustainable. It is this awareness that is encouraging a new way of seeing—a way of looking for the patterns that connect.

This natural way of looking for patterns that connect is more closely aligned with the original meaning of the word, "Education." It encourages the study of the natural patterns that emerge in our individual minds in the process of becoming familiar with "what is" in the social experience. We believe that it is in this shift of perspective on education that a more humane civilization can be created within our endangered natural world and the increasingly coercive social world.

We initially chose the title, PATTERNS, for this publication to encourage this shift in perspective among educators based on the ground-breaking work of Gregory Bateson. He recognized that biological evolution and human learning were both instances of a more inclusive pattern. He showed us how both the body AND the mind—both natural and social systems, both mind and nature—respond to the explosion of possibilities that is life.

To educate is to keep open the number of choices that might assure more sustainable patterns for living systems. Thus the metapattern of variation and selection in the action of the body and the mind can be understood in the dynamic over-arching pattern of Evolution. We believe that in this shift to seeing that our education must now help us to re-cognize that we are, individually and together, responsible for our own evolution is the great task of our time.

We look forward to the evolution of PATTERNS, which would follow the pioneering spirit of Heinz von Foerster and others. They saw that to move from

research, which probably no scientist would ascribe to, and insist that everyone does it that way. I have worked with people who have no experience in supervising and I am appalled at their interpretation of what is required because it kills all the imagination and so on. That's why you have to find ways of showing that research doesn't have to be this deadly, third person scientific quasi-objective sort of thing (although that's appropriate and enormously valuable in certain circumstances) and help some people see that there are other ways of doing research. Then I supervise staff, I teach supervision and I supervise students and I advise them.

B. I'd like to ask you when you get in that situation where people insist that objective observation is the only way to do research, how do you do that? How do you approach that problem of bringing them around to a more cybernetic view.

R. It's not a more cybernetic view. It's a more general view. There's a sense in which we have allowed science to hi-jack our notion of what is proper, and we model everything on a very restrictive and "cartoon-like" view of what science is and how it's done. And a great deal of the scientific machine and the propaganda that it produces promote this. Designers are not scientists, they are looking for something different, they are doing a different sort of thing. And there is a difference between what happens in science and the story that's told about what happens in science. Yet people take the story literally. It's important to understand the difference. What I have to do is to remind them that there are all sorts of people doing research—anthropologists, people in medieval times, doctors and most medical research and so on—which really isn't done according to scientific principles or, at least, those cartoons. Science can be understood as being much wiser, a much more beautiful approach than they believe it is. And there are many other ways of dealing with research. Research doesn't just mean doing that research which postulates an external reality that exists independently of us.

B. I was very interested in your distinction between the observer of and observing in. That's an important area for research it seems.

R. Yes, if you are talking about designers. Designers are people who are involved in making things. The designer aims to produce something which is not a repetition of what has been done before. This is quite unlike the scientist who is trying to get the same results, or is trying to test the validity of those results. The designer is trying every time to make something new—that's what designers do. People who are involved in making something new rather than being involved in just describing what is, have an interest in changing what is. They know that they are not standing separate from but are actually involved in the activity. So if you are a designer and if you are studying design you need to face the question, how can I act on this without involvement?

Actually the way you do design is an active experience. You don't do design remotely. The great trick of designing—which is sketching—is a trance-like activity. This is an experience. It's something that you do. It's not something that you describe. If you want to do research which will help design, then it needs to be a research that recognizes the position of the designer not as someone who studies, but as someone who acts. And so I am interested in the emotion of the observer, because that is the act of the observer. And that's the cybernetic observer.

When I talked about this at the ASC Conference, someone made a point that I was still talking as an observer of. Thinking about it, they were right. Of course, the difference is what I was doing was not creating an experience but creating an explanation. So I was always in a sense standing outside the system. When you are inside the system you are talking about experience and of course it can only be shared by those within the system anyway, which is why very often when I present papers I actually try to create an experience or an explanation within the experience.

B. And that gets us to conversations. I have been very interested in the World Café movement. Juanita Brown did her dissertation at MIT on the idea of the World Café in which people come together in small groups around café tables where they feel comfortable enough to communicate things a lot more deeply than they would ordinarily communicate—how they really feel about things—and questions get brought up about socio/economic/political

situations. What I am interested in, is that it has become an international movement and it seems to have taken off like “wild fire” just by itself with an energy of its own. You have studied with **Gordon Pask**. Would you talk about how that relates to what you were just saying about being able to experience rather than just observe?

R. There are certain things about conversation that are truly astonishing. Let me first describe what conversation is in the sense of Gordon Pask—or in my interpretation of Gordon Pask. I don’t think he would be very angry at my interpretation. He knew when he was alive how I described it.

A conversation is a circular interaction between two or more participants. What’s important is that it’s an interaction. Let me insert a little aside here. There’s a sense in which there were people doing second order cybernetics which recognizes the inclusion of the observer before second order cybernetics was made by Heinz (von Foerster). Gregory Bateson never talked about second order cybernetics simply because he was always doing it. In a sense, Gordon Pask was also doing this because Gordon’s earliest work, the earliest machines that he built, were truly about interaction. One, “MusiColour”, was an extraordinary machine which was a video synthesizer that received information from a musical quartet that played on stage, and would consequently flash colored lights. Everyone has seen that. Since the sixties, these things have become very popular. What was different about Gordon’s was that his lights flashed by building a model of how the performers were playing. And if it didn’t have to change that model it went forward and would start flashing to entertain itself. So if the musician stayed too much within one sort of mode then the machine would start playing a different mode and the musicians would respond to that so that MusiColour became the fifth member of the quartet. Now this machine is really quite astonishing. Nobody as far as I know has achieved anything like it even up to now. And this machine was truly interacting.

What we have come to call interaction, the way the computer guys speak, is to over-inflate everything. So, rather as you Americans seem to upgrade all types of typists and secretaries who we now call personal assistants, we have inflated so called multi-media (actually a homogenized mono-medium); just as we have inflated action and reaction, calling it interaction. Action and reaction is all it is. All reactions that the machine will display to your actions are programmed. They are determined. They are within a deterministic framework—but they happen so fast that you believe they are not. And that’s actually good enough. Why shouldn’t interaction be what we believe as a result of what we perceive?

This is a curious way I am talking. Interaction is something where you have intelligence shared between, where each brings something which contributes to a constantly wandering whole which isn’t attributable in any analysis to one or the other in any deterministic sort of way. So interaction is about constant surprise and “new” and so on. What Pask did with conversation allows that.

Let me explain how it works. First of all, the premise of the conversation is that each of us constructs meaning in our own heads, or wherever it is we have these meanings. We make these meanings, ourselves. It therefore means (which is a word I should not use here) (laughs), it therefore implies that we cannot communicate by means of a code. All that code-based linguistics, all that semiotics and semiology, is not really part of this Paskian world. We don’t send a coded message. I will give you a good example. Politicians, at least in the UK, say “I have made it perfectly clear.” What this indicates is that they have not made it perfectly clear otherwise they would not need to insist they had, since they would have been understood. But, crucially, it also indicates that they misunderstand the responsibility for developing meaning. They think that they are communicating meaning, meaning using a code of language, whereas it is actually up to the listener to create the meaning depending on what he or she hears or sees or senses. The important thing about a conversation was that each participant creates their own meaning and these meanings cannot be communicated: they are private.

That would be a desperate situation were it not for what Pask offers, which is conversation. What he says is, “I conceived something.” If I had a blackboard I might draw a picture of a tree and then I would say to you, the word “tree” and you would, presumably, hear something

a civilization of control and imposed morality which tends towards the death of creativity and the sense of responsibility for a living planet. We must create an ethical civilization of freedom and individual responsibility based on a “biology of love,” a natural desire for life for all beings. This is the *evolutionary task* we must address in our global Educational systems.

With the help of other thought-provoking pioneers such as Humberto Maturana and Francesco Varela, we will share the conscious act of examining the perception of the future. In this process we see ourselves participating in the socially invigorating invention of the future of perception.

On page 9 we highlight an article by **Tom Atlee, of the Co-intelligence Institute, titled *Learning to be Evolution***, in which he asserts that all the information is available. “The central issue is what information do we as a society chose to listen to?”

“The time has found us.” as Thomas Paine in another period of political and cultural turmoil assures us. This time we are not only inspired by the giants in the new field of Systemics and Cybernetics who encourage us to “look for the pattern which connects,” but are also technologically aided by the evolution of the world wide web, which has emerged as a meeting place for a great many intelligent people from around the world.

Stuart Umpleby, past president of the **American Society for Cybernetics**, asked the following question at the 2005 ASC Conference; “*Why has the promise of Margaret Mead, Gregory Bateson and others in dealing with the complexity of minds, their interaction (Ecology of minds) and ways of thinking about social/cultural issues shown such few results? Does the structure of the university and research itself militate against dealing at this fundamental level?*”

In the lead article of this issue we have a conversation with **Ranulph Glanville** which addresses this question in a round-about way. He speaks of **John Frazer**, one of the fathers of computer-aided design, who said that, from a very early age, he really couldn’t see a single argument that anyone had produced to sustain the notion

that you had to understand first in order to act. Reversing this traditional University/Research structure, one could say that you have to act in order to understand.

In the evolving PATTERNS we will explore evidence of acting and understanding as a continual dynamic cybernetic process of *being* that is beginning to happen outside the walls of Academia. It is happening in the marketplace of human hearts and minds. We will endeavor to bridge a gap that we see in the present separation of the act of talking *about* more socially viable conceptual systems and the act of *celebrating the evidence* of more socially viable conceptual systems that are already designing themselves in the compassionate and informed actions of courageous citizens. Indeed, the time has found us!

The evolution of PATTERNS was the subject of a poster presentation at the *International Society for Systems Sciences (ISSS) Conference* last July. Response from conference participants encouraged us to see that the challenge of our times is not to try to “fix things” or “to solve problems,” but to examine our ways of thinking and seeing—our perceptual patterns that might foster a sustainable world and a viable human society. Understanding the geneology of past ideas, we may become more aware of the perceptual patterns that influence our current perception of the future.

Ranulph Glanville tells us that he studied at the Architectural Association School in London in the sixties and early seventies, where he was mainly concerned with electronic performance music. On completing his studies he was sucked into teaching, mostly architecture, but also art, graphics, design, research methods and cybernetics at Cambridge University, the Architectural Association, University College London, and the University of Portsmouth. He has helped supervise doctorates at a number of other universities, has been visiting professor, lecturer and critic on 6 of the world's 7 continents, in a wide range of subjects.

He gained two PhDs: the first (with Gordon Pask) in Cybernetics; the second (with Laurie Thomas) in Human Learning. He has just been awarded a DSc in recognition of pre-eminence of his research contribution which includes over 270 publications. He is on the editorial board of several journals, the committee of more conferences, and is Vice President of the American Society for Cybernetics. He has also been a chef for a highly regarded restaurant.

(what exactly you hear we might later discover, by means of a lot of conversation). But anyway, something-or-other occurs within your field of awareness which you attribute to me. You listen to this and you wonder, “what concept can I construct that goes with what I am hearing? In other words, how can I understand this?” So you might, indeed, make some mental model, which you draw on the blackboard—instead of it being an oak it might be a spruce tree. (I call it a tree because I’m explaining this in the (negotiated) public domain: but that’s not part of the conversation. Don’t let’s get distracted by this, please).

Next, you want to check with me that you have understood what I have said.

What I mean by saying you have understood what I have said (in this Paskian context) is that you have built an understanding of your own which, by your attempts to communicate to me, I find doesn’t clash with what I had built as my understanding—and tried to communicate. So you say something back to me. (If you repeat “tree” it’s no help, because that only shows you can imitate me). You say something, let’s say (in my example) “arbor” (which happens to be Latin). I hear this and I think, hmmm, and I make some (further) understanding from this, and I now compare the understanding I made from what you say to the understanding I was working with initially. I compare them and ask myself, “Are they alike enough?”

If they are alike enough, I decide you understood me. And if they are not, I say, “No, what I meant was ... I didn’t mean a conifer. I meant a deciduous tree.” And we would go around the circle of exchange again, saying, perhaps, you think of something maple-like instead of spruce-like. This process is a way of reducing error and we now have a way of communicating that doesn’t involve the belief that we communicate meaning but rather each participant creates their own meaning. What is communicated is not the meaning. What is communicated is something which allows me to build my own, “second” meaning, which seems to be close enough to the first for us to agree that the circle is complete. And thus I can take it that you have made an understanding which is going to work for you like my understanding does for me.

B. That sounds to me like neutrality ...

R. In a sense it is. However, what I call “mutual reciprocity” is intended to be something a little different. When you draw a distinction, there is a question of what quality do you attribute to each side of the distinction. What I felt was needed was to say: if I draw a distinction, then every quality that, at the time, might attribute to one side might also be attributed to the other. I don’t mean it has to happen, just that the possibility has to be there. For instance, if I draw a distinction between you and me, and I say you are a woman, and I am a man, there is the potential in that distinction that you would have been a man and I would have been a woman. It doesn’t have to happen, in this case it didn’t happen, but the potential is there. The qualities that I can attribute on either side, for instance, gender or being people or whatever, these things might possibly exist on each side. That’s the point, they *could!* I am not saying that they do but they could exist. This gives you a way of reflecting yourself into another. So it allows me to see a possibility we might understand if I draw the distinction between you and me: I say I can have an understanding, so then I say it’s possible that you could also have an understanding—we could both have an understanding.

There is a reason this mutualistic mechanism was important to me in the first place, and I’ll try to explain. If you make a statement like, “I know this,” in which you are predicating a universe on the notion of knowing, the question is how is there an “I” that enters this universe? And that question turns out to be part of this matter of mutuality, which goes right back to my doctorate with Gordon Pask, examined by Heinz von Foerster.

When I say, “I know this,” I am implicitly saying, “I know I know this,” because I am predicating everything on knowing, so I must also be a predicate of knowing. And then you have to ask, “Why should this (in “I know this”) be any different?” This is also, in this way of speaking, an inhabitant of this universe—a universe of knowing, of other things which can be known—including you and me. In which case, this (other) must know this. So it is predicated on the notion that if I say “I know this” I am implicitly saying “I know I know this know(s) this:” which involves two self-referential entities. It is the *self-referentiality*

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which allows you to talk about them as being (having an autonomous existence that can be treated as separate from oneself). It is essential to be able to be explicit about the notion that if I am a self-referential entity, then I must be able to treat this as a self-referential entity as well: to assume this know(s) this. If I make my entry conditions that I am self-referential, then this other must be treated as self referential, too (which is, I believe, a prerequisite for a conversational partner), leads me to my particularly clumsily named, "Law of Mutual Reciprocity"... By saying there was something nice about tripping over it, not quite being able to say it easily ...

B. I am fascinated because it enters into the impulse for conversation because it strikes me as it raises the need to be able to check out the other self referential. I feel as if I am back in the beginning where two cave persons are experiencing each other and are discovering language.

R. That was the purpose of my Ph.D.—not that I knew what it was about when I finished it, so when I tell students they have to know their research question, I have always to pinch myself just a little because it took me 30 years to discover my research question! (But then, I argue that design is an activity where the solution finds the problem; and not the other way round.)

B. When you think in circularity you get into this sort of thing, holistically.

R. Yes: what I am trying to do is to find a structure that allows that each of us understands our world differently but we each of us are able to pretend we are talking about the same thing and that's a crucial question. It's essentially the conversational question. For any of these circular systems, any forms of self-reference, I maintain that this is a very fundamental question indeed. It's as fundamental as any of those other questions in cybernetics. And you are right, the thesis itself is written as something which is astonishing It's so abstract that, in a funny way, almost no one can read it. It's terribly short and I wrote the main body in one 15 hour session after doing a lot of preparatory work which however, is incomprehensible. And now when I look at it I am always astonished by it. You can see it as dealing with things such as the first attempts to communicate. But I have to say the communication part is taken directly from Gordon. To go back to conversation for a moment, once you return to a long description of how conversation works (of the sort I tried to talk through above) it becomes possible to discuss how conversation always brings novelty through the notion of interaction, which is what Gordon did all his life, right from his earliest research in 1952.

What you get from conversation is this. If each of us understands the world differently then what we say back to the other person is, inherently, going to be different: it is going to come from your meaning which is not my meaning, and, therefore, there will always be a certain disagreement. Language will do a lot to hide this, to smooth it out, especially language as we use it which is sort of like a club entry fee—you have a joining fee for a language which includes an agreement to use it like everyone else does. In that sense, language is a social system. Language as studied by linguists does indeed have us use it as a shortcut; and it is a shame we don't remember it's a shortcut for the construction of individual meanings. So what you bring into a conversation is exactly not what I bring and therefore every time we communicate there is, in effect, the certainty, if I'm prepared to see it, that you are bringing me something other than what I already have—so there is always a gift of novelty (for me) that comes from you; and there is always a gift of novelty from me that goes to you. And so, when we have a conversation, there is always something new coming up and that is not only a way of expanding and getting ideas ourselves; but it's also why, if you sit down and have a conversation with somebody, then, unless it is completely scripted and it's not a conversation at all, it's an interview and it's directed, the conversation will end up in places you never imagined.

Now just one more thing about conversation, the way that I described it is of course very pedantic, and very tedious and slow. If we were really checking every meaning in the way I described, we would never get anywhere. We don't have to do this, we learn that we can let things slip a bit and just at certain points in the conversation you will stop and say, "Now hold on a minute, let me check I have got this right," And that's how we really test

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The Road Never Traveled

No One Has Been to Your Future

by H B Gelatt

*"Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference."*

—Robert Frost

Apparently Robert Frost was recommending a non-traditional, unconventional, more creative approach to life's journey. The problem is that today we don't have a choice between the road less traveled and the road more traveled. We must choose the road never traveled because no one has ever been to the future you and I are going to. The future doesn't exist; it needs to be created. We have two choices, create it or let someone else.

"The future isn't someplace we are going to. It's something we are creating." —Unknown

If the future is something we are creating, three beliefs about the future are necessary:

- The future is not predetermined.
- The future is not predictable.
- The future is persuadable.

The third belief, the future is persuadable, is obviously necessary or it wouldn't be possible to create it. And the third belief is only true if we believe the first two beliefs. If the future is predetermined, then it is not persuadable because it has already been determined. If the future is predictable, we won't be able to persuade what is predicted or it wouldn't be predictable.

When the future is predetermined or predictable all we can do is ascertain what future has been determined or predicted and plan to prepare for it. When the future is persuadable we can imagine a desirable future and plan to create it. To predict and prepare has been the standard operating principle in the past. It is the basis of public education. We predict what skills students will need in the future and prepare them by teaching them these skills. It is interesting to me that so far I don't believe we teach the skills of imagination and creativity in public schools. And we require courses in history but not in the future.

(continued on next page) 5

One reason many people don't make creating the future their choice is because they haven't been taught to. Another reason is because of a new neurosis of the future I have identified, "reverse paranoia." (See my website, www.gelattpartners.com for a description of four new neuroses). Paranoia, as you know, is the belief that someone is following you, out to get you. Reverse paranoia is the belief that you are following someone who is out to lead you. Reverse paranoiacs want someone to create their future. They want not just a leader but a visionary leader. They want someone not only to lead them to the promised land but one who will also imagine the promised land for them.

Reverse paranoia prevents people from taking responsibility for imagining and creating their future. To believe that you can be responsible for creating the future is somewhat frightening and therefore avoided. It is easier to be the result of the past than the cause of the future.

The road never traveled is a useful metaphor for imagining and creating your future. It fits with the popular metaphor, life is a journey. Metaphors are useful in helping us, maybe even forcing us, to understand what is difficult to understand or what we don't want to understand. If we think life is a journey on a road never traveled, what does that mean? To me it means that life is a process, not a destination. And it means we need a non-traditional, unconventional, creative approach to life's journey.

So how do you make your personal decisions about an unknown future? Traveling on the road never traveled invites, although it doesn't require, new ways of thinking. In her editorial, Barbara said that a real threat to our future was "our own way of thinking." Here is one suggested new way of thinking:

The way you see the journey makes all the difference

This is because the way you see the journey determines the way you travel the journey. And your way of seeing is determined by your beliefs and predispositions. The way you see the problem often IS the problem. I believe the

a conversation. You can let things go in a sort of free-form way. The conversation expands a bit, and then we have to sharpen up and say, "I need to do the error regulation, checking that my understanding is like yours and I have to do that precisely" and we say, "let me just summarize what you've been saying and hold on a minute, have I got it right, what you are saying?" So all these little things are our way of making sure that the fluidity that we have given to each other and the benefit we get from trying to understand the other works so we actually do benefit from the gifts that are on offer, to make sure that somehow or other we are not actually diverging—so that, in the end, there will be no conversation.

B. It's like circles within circles, the circularity moving yourself. It's very interesting in the world today because I try to relate all this new understanding to how it can help us in creating a better society. The need to be able to communicate with people who think entirely differently from you, like with the radical fundamentalist, is becoming a social necessity in the United States. Could you relate what you were talking about to an actual conversation between a Christian fundamentalist and a liberal agnostic?

R. Well, let's go back to that law of mutual reciprocity and apply that to the conversation. The law tells me that everything I believe for me I have to believe also for you. So that all the good I can think about me I must be able to think about you and every bit of good behavior that I expect from myself I must also be able to expect from you and every bit I expect from you I must also expect from myself. I think that there is an important ethical dimension about this law. And what happens in a conversation is that you have to respect the difference with the other. You have to respect that their meaning is not yours and that you cannot force your meaning on them (any more than they can force theirs on you). Code thus becomes a very specialized form of conversation in which you reduce the circle of conversation so it becomes, in effect, just a line. It takes about three months to convert your average teenage boy into an unthinking programmed machine that belongs to the armed forces or the police or whatever. These (paramilitaries) are people who use language in order to communicate very quickly an intended action so if you say to someone "shoot" you don't want to negotiate what you meant. So we have the destruction of the individual and the individual meaning. That's the whole point of coded communication, of course.

As I see it, you need conversation in order to be able to set up a code: otherwise you are just shouting at people and they don't understand. If you agree with me, you will thus find conversation (rather than coding) is primary in communication. The problem is, I think, that this understanding is not generally shared. When you talk about fundamentalists, you are talking about one of many groups of people who believe they have the right, and that this gives them the right to act on this in any way they chose, believing only in the value they hold and not in any form of mutuality. They believe there is a code, and they believe their meaning is communicable and it is given by God. Of course, it has authority and it is communicable and it should be communicated by being forced on those who don't understand, don't share this view (I'm speaking ironically). I don't think that there is much we can do which will fight this because their view fails to acknowledge and act on anything to do with conversation. I think that we, as a society, have actually gone a long way down the line to facilitate this way of behaving by talking about key meanings and so on. But there is one thing we can do and that is to refuse to give in.

B. Describe that, please.

R. Well, that means refusing to play their game. It's refusing to become absolutist. It's maintaining what I will call our own ethical stance. Ethics and morality are words that I don't generally like to use. I feel uncomfortable with them. But I feel more comfortable now about ethics, in contrast to morality, which is telling people what to do. In some sense the terrorists have already won because we have started treating society not as a liberal democracy and, certainly, not based on trust (consider surveillance, and so-called security measures). We treat members of society more and more as untrustworthy and as needing to be told what to do. We are losing our freedoms, and we have politicians who are very anxious to take them over. Very often politicians are like that because they want to be in power rather than to serve.

And so in a sense we are in the process—or we are well along the way in the process—of losing the freedoms and the qualities of society that the terrorists and the Christian funda-

mentalists and all such people reject, which it seems they most object to—which we like to think characterise our western way of life. We are just playing along with them, which is appalling, and in so doing we distort our values and buy into theirs.

But there is one thing, and that is the compassion. We believe in the importance of compassion, that we have to keep showing it. We can resist by refusing to participate, by refusing to become part of that way of being and doing things. And, since you have just mentioned world cafés, that is perhaps a way of doing this because they provide a place where we can react openly and trustingly.

I remember being at a conference not so very long ago where someone said, “You know, one in a million pedestrian journeys ends in an incident. This is awful. We have to protect ourselves. We must be very careful, we need new laws!” And so on. And I thought: that means 999,999 journeys end in no incident; and you are prepared to damage all of our lives because of this one incident. You are prepared to live in fear and to restrict yourself, to behave in an awful manner, to be totally miserable because of this? Of course, for the one person who suffers the one in a million incident it is dreadful. Of course for the relatives of the people who die in terrorist acts and of course those people who die, this is an enormous and terrible catastrophe. But it’s a personal catastrophe and it belongs to them. We are all going to die and we don’t know how and when. I am not excusing terrorists or any other group, but I think we have to be very careful of allowing them to call the tune, to set the agenda, which is what they succeed in doing because we take these isolated things, the one in a million, and we allow our lives to be dominated by them. That’s why terrorism works.

B. There seems to be another side of it also. The people who want to control will use that in order to control.

R. Yes, of course, I don’t know about it here in the United States, but I have experience in England and in Australia, where I work quite a lot. The Australians have suffered, as you know, what we regard as major catastrophes from bombings in Bali and they have arranged national memorials to the people killed in those events. But these are people who were there having a hedonistic holiday and who were very unfortunate in that they got bombed. It is wretched for the people concerned. There were four people who died in the latest bombing just a couple of weeks ago and an entire industry is developing around “Australia Mourns.” That sort of thing is often a way of acquired glamour by association with someone else’s personal catastrophe. In Western Australia they have done one of the most inappropriate things of all (I will lose friends for saying this). In Perth there is an enormous, very moving park which is a war memorial for the men who went to Europe in the First World War: avenues of trees with one tree named for each dead soldier. You think of these young guys going half way across the world to fight the war, giving their lives for beliefs about how the world should be, an ideal for humanity, fighting in a place they didn’t know and against an enemy they didn’t know. This is selflessness. The avenues meet in a memorial that looks out over Australia, on top of a cliff above the Swan River. Next to it they have built a memorial to 20 kids killed in Bali a couple of years back, who were having a good time on the cheap in Bali when they were unfortunate enough to be blown up. These kids are being honored as heroes, indeed they are universally referred to as Aussie Heroes. I really am not attacking the kids nor am I attacking the families. I think it is awful what happened to them, as is any premature death or death by violence. But I think, also, that when we start treating this sort of event as a national disaster and convert these people to martyrs in the way that we convert people who gave their lives fighting for what they felt was freedom and a better world they believed in, we really are behaving in a very inappropriate and rather sick way. The kids who were killed were not heroes; they were unlucky.

However, we make a meal out of this. We turn what is a small, local event (a horrible event) into a major event on a global scale. And who benefits? Our maudlin side gets fed—which isn’t healthy. But the real beneficiaries are those who use this to take more control (in the non-cybernetic sense) and further reduce our freedom. And that’s not the terrorists, but our own leaders and their trained executors, the paramilitaries.

B. We need people like **Joanna Macy** who is a systems scholar and a Buddhist and who
(continued on next page)

minute you make up your mind that the way you see things makes a difference, it will make a difference in the way you see things—and do things.

“The real voyage of discovery is not in seeking new landscapes but in seeing with new eyes.” —Marcel Proust

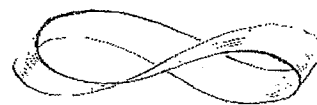
To borrow from Robert Frost, I suggest you approach your travels with the belief that the way you see the journey makes all the difference. Your image of the future may be the most important factor in determining what it will be. If you believe that you can influence your future you will see opportunities to do so and therefore be more likely to take creative action. If you believe that you can’t influence your future or that someone else will, you will not see these opportunities and therefore not take creative action.

This “new thinking” comes from the new sciences and the old eastern philosophies. They are telling us that *believing is seeing*. Seeing is believing is out of date thinking for creating an unknown future. And reverse paranoia is giving up personal influence.

No road traveled and no road map opens up personal creative possibilities. The absence of a designated itinerary to the future means there are many possible routes that need to be imagined and created. The future may be unknowable but it doesn’t have to be unthinkable.

Today you need new thinking and believing in your approach to life’s journey. What you decide to do today partly determines what your future will be, and partly reflects what you believe it to be. What you think and believe is up to you; it’s your creative choice. You can decide to create your future or let someone else. It is said that when it comes to the future there are three kinds of people: those who let it happen, those who make it happen, and those who wonder what happened. Which kind are you?

“On spaceship Earth there are no pilots only crew.” —Buckminster Fuller



Book Review

How People Harness Their Collective Wisdom and Power to Construct the Future in Co-Laboratories of Democracy

By Alexander N. Christakis
with Ken Bausch
Information Age Publishing,
Greenwich CT, 2006

Reviewed by Allena Leonard,
May 2006

Christakis and Bausch are to be congratulated on providing an accessible and affordable book with a number of examples of the democratic Structured Design Process (SDP) and its methodology.

In the interests of disclosure, I should say that I am a licensee of Team Syntegrity, the group process invented by **Stafford Beer**. Our processes, and others such as Open Space, Future Search and Technology of Participation, are in some sense competitors. But the more important competition is between defaulting to a version of command and control, letting "the experts" handle it or opting for participatory democracy and getting confusion and frustration instead.

Most group process tools are relatively new—that is, formulated in the last thirty to forty years. These processes have yet to have been used widely enough to have a good picture of which are the hammers and which the screwdrivers. Experience is being accumulated about what is most useful given certain types of problems or different constraints. As more of this information becomes available, and as the case for using a group process becomes more obvious, I expect that a number of group process methodologies, including all of the above mentioned, will find their appropriate niches.

Christakis traces the roots of SDP to the culture of Ancient Greece, where leaders with vision determined that democracy underpinned a stable society.

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works in the community with people to help them feel the pain in order to be able to go beyond the tragedy so they can be active in changing our situation. Juanita Brown, who created the World Café movement that we spoke of earlier, is another such person. These are the kinds of people I also like to highlight in the pages of the ASC newsletter, PATTERNS. Bringing academia and activists together to create a holistic view of our present situation strikes me as what PATTERNS is all about. I like to think we are creating a sociological understanding of what Bateson called "the pattern which connects."

R. Sometime people who come from certain disciplines have a great blindness toward what other people do. I have come to believe that cybernetics and design are essentially the same thing. That the process by which design has worked is the essential process of a cybernetic system which is circular feedback, circular causality in biological and social systems, as the **Macy Conference** title tells us. To dismiss design education is, I think, to show a certain narrowness. It's like the way that the academic world has been unable to deal with the notion of research in design because it doesn't look like science. We talked about that in the beginning of this interview: There is a different type of knowledge, a different way of dealing with the world which is about action instead of understanding. The question as to whether you need to understand in order to act, I think is very, very open.

I remember John Frazer, a student with me and who had an educational background not so different, and is one of the fathers of computer-aided design. From a very early stage he said that he really couldn't see a single argument that anyone had produced to sustain the notion that you must understand first in order to act. And there are those who would say that you must act in order to understand.

B. Is it a circular process?

R. Well, it could indeed become circular but it might be that without an action in the first place it is inconceivable that there might be any understanding. So you could try telling the story the act-to-understand way, whereas we have an epistemological tradition in which you have to understand in order to act. Now that's very, very bizarre. I think the moment we stop thinking that way, we will find it easier not only to recognize design as a universal activity, but to recognize cybernetics as the way of formulating and describing design, explaining what it is that we do and looking at it so we can understand it, and thus we will understand what cybernetics does better.

B. ...and what it is.

R. It is because of what it does. It is, I think, a little bit like my argument about intelligence. My interest in intelligence is not to specify what it is, but to say where do we find it? And I think we always find it "between." We don't find it "in." We find it between and as a result we attribute it and try to position it....that I see is where intelligence happens. It happens in things like this conversation. Without this conversation there isn't intelligent behavior. Intelligence is always the result of an interaction which may, however, on occasion, be so weakened in its feedback as to be treatable as if it were just an action. That's why I think circular systems actually have priority over linear systems. The linear system is a circular system with weak feedback or feedback we have planned and chosen to ignore. This was the clever trick of what I'll call Newtonian Science although, interestingly to me, the method of science was, apparently, first formulated by Joseph Glanville in 1670, or there about.

B. An ancestor of yours?

R. We all go back to a little village in Normandy and of course Normandy isn't French, it is Viking, so the name Ranulph is a Viking name.

B. It certainly is obvious that you spring from a line of great Explorers and I thank you for taking me along on this journey.

Walk tiptoe on the edge of the insatiable precipice and struggle to give order to your vision. Raise the multicolored trapdoor of the mystery—the stars, the sea, the living and the ideas; give form and meaning to the formless, the mindless infinitude.

Nikos Kazantzakis (1923)

Learning to Be Evolution

Excerpts from an article by Tom Atlee.

Tom Atlee is the author of *The Tao of Democracy: Using Co-Intelligence to Create a World That Works for All*.

(The Writers' Collective, Cranston, RI, 2003
ISBN:1-932133-47-X) <http://www.taoofdemocracy.com>

Billions of years of creative trial and error have added up to the world we live in. Some of that world is profoundly exciting and enjoyable. Some of it is increasingly scary. Things are getting better and better and worse and worse, faster and faster. Much of it is changing faster than we can follow, its novelty and complexity racing ahead of our individual capacity to understand and respond.

We face daunting choices about how to respond to changes that seem forced on us. We also face compelling choices about creating a better world from the depths of our hearts and our dreams.

How did we end up in this place? Individually and collectively, we are products of evolution. Evolution produced us through 13.7 billion years of trial and error and a few thousand years of more or less conscious choices by thousands of people we call our parents, leaders, elders, ancestors. Little did they know what would happen.

And now WE are the ones making choices that are shaping the evolution of the future -- not only future generations of humanity but future generations of all life on earth.

We are the soul and substance of cosmic evolution, happening right here and now.

It is slowly dawning on us that our species will flourish or fade away, thanks to the evolutionary choices we make now, whether or not we know what we are doing.

We are at a critical stage in our remarkable human journey on this planet: We are coming to a place where the road ends. From here on out, we will be making the road as we walk it, in ways we've never had to do before. We now have the job of forging our own evolutionary destiny, and being prime agents of the process of evolution here on earth.

It behooves us to learn something about the job description, starting with the story of who we are.

It is not mysticism but hard science that now tells us we are made of stardust and light, waves and coalescences of stardust and light reconfiguring into cars and trees, oceans and civilizations. We, humanity and the living earth we are part of, are the soul and substance of cosmic evolution, happening right here and now. We are the living face of evolution, the eyes and hands and wings and minds of the universe weaving itself into its next manifestations, day after day after day. And humans are a growing edge of the universe becoming conscious, watching itself through microscopes and telescopes, mountaintops and meditations, awed, nudging its pieces into greater awareness and love.

We humans are also the universe broken apart in the illusion of separateness, the arrogance of our small but growing power, the pursuit of our small but growing desires. And we are the universe waking up from this dream of separateness and smallness into the discovery of ourselves as conscious, loving Evolution, finding ever more remarkable and inclusive forms of cooperation. We are both the universe's sleep and the universe's awakening.

Here on earth, we are stardust-as-human-civilization dawning into an evolutionary imperative: the creation of a collectively wise culture that is capable of its own conscious evolution. This unprecedented challenge is more than an enticing possibility. It is a collective necessity, a matter of survival. It is our next evolutionary leap and

we are that leap.

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Citizens gathered in the Agora to discuss the day's events and make decisions. North Americans may be more familiar with the heritage of the New England town meeting. In both these settings, people knew each other and their communities. Although there were differences in wealth and status, they were not so extreme as to make them inhabitants of different worlds. Together, they had requisite variety to understand their situations: the decisions weren't necessarily the best, but they were made at the right scale. When circumstances reflect a larger scale and accelerated timing, the dialogue format that served well enough in the past doesn't work any more. This is the problem that group processes address. They are necessary now because the social environment has changed in ways that limit the effectiveness of command and control either because of the increased amount of relevant information or because actions must often be taken in concert by otherwise independent entities. In his book, "The Wisdom of Crowds," James Surowiecki makes a strong case that the combined independent estimates of a group of people are more accurate than those of an expert. Group processes in general, and SDP in particular, are a means to operationalize this observation.

Perhaps it would be useful to begin by indicating some common characteristics of the Structured Design Process and the Syntegration.

- They honor the participants, by giving equal weight to the input of all stakeholders.

- They carefully separate the managing of the process, which is in the hands of the facilitation team and the generation of content, which is the sole prerogative of the participants.

- They take variety (and, explicitly or not, adherence to Ashby's Law of Requisite Variety) as a constraint that must be obeyed. This is done, albeit in different ways, by letting the process take some of the cognitive load off the participants.

- They hope to emerge with progress having been made that has been democratic, has drawn upon multiple perspectives, and has produced results that many if not all can support.

(continued on next page) 9

Learning from Evolution how to Be Evolution

It is interesting that, although both protocols fall within the systems field, their antecedents, except for Ashby, are so different. SDP draws upon and extends the Warfield and Christakis Interactive Management while citing Miller's Law of Parsimony (magic number 7 + or - 2) Boulding's Law of Requisite Saliency, Pierce's Law of Requisite Meaning, Tsivacou's Law of Requisite Autonomy and Dye's Law of Requisite Observations. In contrast, Beer draws upon biologists Bernard and Cannon, upon Bavelas's net theory, Fuller's Synergetics, McCulloch's neurophysiological experiments and Euler's mathematics. It is a tribute to the rich legacy of the systems and cybernetics community that this is possible.

Here is a brief summary of how SDP works:

The first "Discovery" stage of the SDP sets the context. In collaboration with the sponsoring organization, interviews with 12 to 14 representative stakeholders are held and a synopsis of the situation is prepared. The triggering question is formulated from this and the synopsis is given to participants to read before the meetings.

In the "Design" stage, the participants, whose numbers range from ten to two hundred, gather and contribute the content that they believe is relevant to answering the triggering question. They begin by writing their answers in small groups. Then each person shares their ideas, one at a time, and answers questions of clarification. Once these answers have been captured, the participants engage in voting to build affinity clusters answering the generic question, "In the context of the triggering question, does issue X have significant attributes in common with issue Y? Votes are taken to sort the issues by importance and another generic question is used to create an influence tree that would indicate which factors have the most or most basic influence (an example in the book has seven levels). A computer program presents each factor in about four pairwise comparisons, records the participant's votes and assembles the results that show what must be done on the deepest level to resolve the

Here are just a few of the evolutionary dynamics and opportunities we can explore and use. A major project of the Co-Intelligence Institute now is researching more of them, and how to best apply them all, and spreading that new old knowledge.

1. LOVE AT THE CORE.

Our common past makes us kin, and deep inside we know it. We are wholeness en route to new wholeness. This deep truth can be called forth to help us resonate with each other. Much of what we need to do next taps into this powerful fact of life.

2. A NEW DANCE OF COOPERATION AND COMPETITION.

Evolution has evolved with cooperation enhancing competitiveness. As we become a global society, competition will necessarily evolve to support cooperation.

3. SYNERGY BETWEEN SELF AND WHOLE.

Life on earth finds novel ways for self-interest and the whole to serve each other. We are called to create new ways to design this dynamic into complex 21st century societies.

4. HIGHER LEARNING.

Evolution is, itself, a vast learning enterprise -- and emergence is its learning edge. That edge involves new forms of ongoing collective intelligence and wisdom, and re-framing education to meet the challenges of conscious collective evolution. By its nature, learning on the edge requires a growing capacity to embrace the unknown.

5. SELF-ORGANIZATION AND EMERGENCE.

Evolution starts simple and brings forth increasing complexity. At the same time, it creates remarkable ways for life to self-organize without top-down direction. Our social and technological complexity is now calling forth new forms of creative, conscious human self-organization.

6. EVOLVING CONSCIOUSNESS.

Consciousness shapes social systems and culture—and social systems and culture shape consciousness. This insight, combined with new and ancient methods of expanding consciousness, offer tremendous leverage for humanity's conscious evolution.

7. THE JUICE OF OUR DIFFERENCES.

A major driver of evolution is the creative use of diversity, conflict, crisis and dissonance. And our uniqueness -- our individual specialness—is a vast nascent resource for the world. These insights challenge us, in times of collective trauma, to move beyond peacemaking and crisis management to catalyzing inclusive evolutionary breakthroughs.

8. IT'S ABOUT PROCESS.

The essence of evolution is the emergence of outcomes from powerful interactive processes. But it isn't about being attached to particular outcomes, since they, too, will change and evolve. If we want to become evolution, we would be wise to learn how to let go and focus on manifesting powerfully interactive, life-serving processes.

These eight evolutionary dynamics and their corresponding transformational projects are but a taste of the rich guidance available from the serious study of evolution's relevance for today. There are dozens of other dynamics and patterns revealed by evolutionary science and related studies which could also guide us—and new ones are being discovered every year.

We are just beginning to learn how to apply these emerging understandings to our lives, our societies, and our efforts to make a better world. This is a new field of study and practice. Its insights will help us see where our energy, attention and resources can be most usefully focussed to build a more sustainable, just, and life-serving civilization.

Perhaps most remarkably, in doing this work—to the extent we learn to consciously apply the dynamics which are already at work in the evolution of life—we are actually becoming a manifestation of evolution in a totally new realm.

Conscious Evolution

To make crystal clear what we're dealing with here: "conscious evolution" is not primarily about the genetic engineering of individual animals, plants, and humans. It is about far greater, more productive and vital challenges—the conscious evolution of our societies, our lives, and our individual and collective consciousness—and the conscious evolution of the knowledge, arts and tools that will make those developments possible. Therein lie tremendous hope for our civilization and an inspiring new view of who we are and what we are doing in this universe.

For we are not just organisms trying to survive, accidents of mutating materiality, or isolated individuals consuming one more mutating materiality, or isolated individuals consuming one more wave of well-advertised products. In a very profound sense, we are the universe, itself, beginning another chapter in its truly remarkable, wildly creative, and keenly experimental Great Story-of-all-stories.

What we do next will be profoundly important. No matter what

The nonprofit Co-Intelligence Institute (CII) promotes awareness of co intelligence and of the many existing tools and ideas that can be used to increase it. The CII embraces all such ideas and methods, and explores and catalyzes their integrated application to democratic renewal, community problems, organizational transformation, national and global crises and the creation of just, vibrant, sustainable cultures. We research, network, advocate, and help organize leading-edge experiments and conversations in order to weave what is possible into new, wiser forms of civilization. The goal of the CII is the conscious evolution of culture in harmony with nature and with the highest human potentials. If you would like to be involved in this effort, contact us at:

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<http://www.democracyinnovations.org>

Tom Atlee's blog: <http://www.evolvingcollectiveintelligence.org>

New Book:

Worldchanging: A User's Guide for the 21st Century

This is a 608 page compendium of the most innovative solutions, ideas and inventions for building a livable, prosperous future, written by more than sixty noted writers and thinkers, with a forward from Al Gore and an introduction by Bruce Sterling.

From consumer consciousness to a new vision for industry; non-toxic homes to refugee shelters; microfinance to effective philanthropy; socially responsible investing to starting a green business; citizen media to human rights; ecological economics to climate change, we think this is the most comprehensive, cutting-edge overview to date of what's possible in the near future if we decide to make it so.

For more information, and to purchase the book, please visit:
<http://www.worldchanging.com/book>. Read advance praise for the book: <http://www.worldchanging.com/archives/005130.html>.
The Buckminster Fuller Institute: <http://www.bfi.org>.

problems. Next, alternative options for action are set out according to agreed priorities and alternative sets of activities are presented as Options Profiles.

In the third, "Decision" stage, alternatives are compared using Trade Off analysis, Priority Representation, and Assignment of Weights. At the end of the process, an action plan may be prepared with standard project management tools and schedules.

A distinctive feature of SDP is that it uses a computer program (Root Cause Mapping) to present participants with paired choices and to sort them into relational trees on the basis of participant votes. The computer can produce these results quickly and participants can go on to the next step.

So, what are its limitations?

The first limitation rests in the Discovery stage, described in the book as the most difficult. The situation to be addressed must be able to be summarized in a white paper describing its boundaries and the perspectives of its different stakeholders. Then a triggering question must be formulated that captures the essence of the problem without privileging the position of any stakeholders. If these conditions can be met, then progress is likely to be made. The case in the book, the Chronic Kidney Disease initiative, is a good example. It is a tangible problem, with comprehensible boundaries. Many of its questions can, in principle at least, be answered by evidence that almost everyone will be able to accept. But not all situations have these characteristics. Some are too vague, some must make progress on culture and values before actions can be considered and some are problems that the participants wish to address but have no immediate possibility of affecting. It is difficult to see how an adequate white paper could be produced under such circumstances, never mind the difficulty of determining influence trees and alternative scenarios and the frustration of numerous votes without tangible application.

Another related limitation is that while SDP is effective in situations that can be mapped with directional influence trees, it may not be as effective

if the situation is dominated by interlocking vicious and virtuous circles. Although factors characterized by circular causality may appear together in a box at a given level in the influence tree, they do not stand out and it may be difficult to distinguish them from simple clusters.

Finally, although SDP offers individual participants time at the beginning to make and clarify their contributions, the later stages of the process depend on the computer to integrate their positions and the communication among participants is dominated by the voting process. Since SDP applications run for two days or in two day groupings, there may not be enough time for exploratory conversation or a reconsideration of assumptions as the event unfolds.

These limitations can more or less be described by the horses for courses metaphor. My impression is that SDP, like Warfield's Interactive Management, will work best where there is a well formed problem to solve or purpose to be achieved and where at least some of the participants are in a position to take action on its recommendations. But, there is no shortage of these.

∞

From Charles Francois...

Stafford Beer said in his famous 1973 lecture on **The surrogate world we manage**:

"The relation between perception, modelling and action should be permanently cyclical. It should also be cybernetic, as any process should ideally be self-correcting in response to its own effects, as well as to the ever changing environmental conditions, including our own tinkering."

Requisite variety

"An entity is autonomous, which means able to manage its own behavior only if it possesses "variety" (a concept introduced by Ashby). This means that it permanently needs a "store" of different possible adaptive reactions to variations in its environment (and know how to use them). It also needs to have reserves of specific supplies, enabling it to take countervailing action when needed."

American Society for Cybernetics

A Report On the 2005 Meeting of the American Society for Cybernetics

Stuart Umpleby

The 2005 annual meeting of the ASC was held at the George Washington University, October 27-30, 2005. All of the various branches of cybernetics, including engineering cybernetics, biological cybernetics, management cybernetics were represented.

Takeshi Utsumi, who has been working for many years to bring the benefits of computer-based communications to developing countries described his work on creating a Global University System.

Eric Dent explained his increasingly widely referred to study of what the various fields of systems science have in common and what obstacles have prevented their further integration. **Stuart Umpleby** reviewed reflexive theories, focusing on the work of George Soros, which provides a link between second order cybernetics and the fields of economics, finance, and political science.

Russell Ackoff, who has made well-known contributions to the field of strategic management, discussed types of systems, models of them, and their implications. **Klaus Krippendorff**, Bateson professor at the Annenberg School of Communication of the University of Pennsylvania, discussed language and philosophy. Anthropologist Mary Catherine Bateson described how longer life expectancies are affecting cultural transmission.

Karl Mueller, director of a social science data archive in Vienna, Austria, described recent developments in meta-analysis and how this work is leading to a second-order science. **Ranulph Glanville** from the UK described how second order theories are particularly appropriate for activities involving design, such as architecture. **John Warfield**, who once worked on redesigning the hugely complicated acquisition system of the U.S. Department of Defense, reviewed many centuries of "thought about thought" and reflected on his decades of experience designing and managing very complex systems.

In addition there were three panel sessions on the philosophy of radical constructivism, three panels on therapy and neurofeedback, two panels on the epistemological implications of quantum theory, and several panels on management methods, information systems, and e-commerce. There was a workshop on open source approaches to innovation and an evening performance by the **Performers Workshop Ensemble**. The meeting ended with an afternoon participatory strategic planning exercise to define future directions for ASC. For those new to the field, **Larry Richards** led a tutorial on October 27.

Abstracts, papers and slides can be found at http://www.gwu.edu/~rpsol/asc_conf.html

ASC has a small booklet with CD-Rom of the Stanford Lectures of Heinz von Foerster.

The booklet has a biography in pictures and the CD features 'A Constructivist Epistemology.'

The classic reference book, Cybernetics of Cybernetics, the only book with basic works of the pioneers of Cybernetics, is also available.

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In Memory of Doreen and Leo Steg

*By Stuart Umpleby and Klaus Krippendorff
With assistance from Elizabeth Corona*

Doreen Steg (1928-2002) was a professor and founding head of the Department of Human Behavior and Development and founder of the Early Childhood Development Center at Drexel University. She developed CAETI (short for Computer Aided Education and Training Initiative). This was an outgrowth of her earlier work on computer-aided learning. By coupling a typewriter, a voice synthesizer, and a computer programmed to adapt to the capabilities of students, she helped severely learning-disabled children learn to read and to type and hence to communicate. Later, when computer technology advanced, CAETI was adopted in numerous countries as the most successful system for teaching the coordination of reading and typing for learning disabled children. She had been strongly influenced by John Dewey and Norbert Wiener. She also wrote on ethics.

She served the American Society for Cybernetics (ASC) as vice president, and she championed the work of women in cybernetics. For a few years in the 1970s she was president of the American Cybernetics Association, based in Philadelphia. In the early 1980s, when the ASC was reorganizing, a few meetings of people interested in cybernetics were held at the Stegs' vacation home on the New Jersey seashore.

Doreen, who was from Belgium, was the American cybernetics community's main contact with the International Cybernetics Association, based in Namur, Belgium. This group held a series of conferences for many years, beginning in the 1950s. They were the first cybernetics association. Ashby and others attended their meetings. About half the papers were in English and half in French. They also published the journal, *Cybernetica*. Doreen received the 2001 Wiener Gold Medal from the American Society for Cybernetics for her longstanding devotion to cybernetics, especially for developing CAETI.

Leo Steg (1922-2004) was an engineer who directed the General Electric Space Science Laboratory. He invented the ablative shield for reentering nosecones on missiles. This shield was used on the Mercury, Gemini, and Apollo spacecraft. The shield consisted of a honeycomb filled with resin. Heat of reentry boiled the resin, which carried away the heat. Movies such as *The Right Stuff* depict astronauts watching chunks of flaming material flying past the window during reentry. This was the ablative shield doing what it was designed to do. You can see this shield on the spacecraft in the Air and Space Museum in Washington, DC. Leo received the Engineer of the Year award for this invention in 1963.

Leo's contacts with the Gordon Research Conference organizers (mostly chemists), led to three Gordon Research Conferences on cybernetics in the late 1980s. He was also able to arrange some supplementary travel funds for speakers due to his contacts in the Pentagon.

Both Doreen and Leo were Jewish. When the Germans invaded Belgium at the beginning of World War II, Doreen's father put the family in their car and they fled to France. She said if the car had broken down, they would have been captured and probably would have died in a concentration camp. Leo was from Austria. He escaped from the Nazis in a kindertransport. They met in the U.S. Doreen said that for years Leo kept a packed suitcase under the bed in case they had to flee immediately. Doreen and Leo Steg established the Judaic Studies Program at Drexel University.

Prepared for PATTERNS, the newsletter of the American Society for Cybernetics.

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Reflections

Humberto Maturana, 1999

"I proposed the phrase 'The Art and Science of Human Understanding' for Cybernetics. Why? The person that guides the ship, the skipper, acts both on practical know-how and intuition. Thus, the skipper acts both as a scientist and as an artist.

"Understanding a system requires both intuition as a gestaltic grasping of the systemic coherences of the system under consideration, and the seeing of the structural (causal) coherences of the locality where the observer stands. Understanding further involves relating these two different operational perspectives in a manner that, although not deductive, shows the dynamic connectedness of any part of the system to the dynamic totality that the system is. So, to the extent that cybernetics has to do with the handling of systems, as well as with explaining them scientifically as they arise in our understanding as observers, I call cybernetics the art and science of understanding. If this sounds psychological, that is to me no problem because explanations are manners of interpersonal relations, and science itself is a manner of living together in the club of scientists.

"I think that to call science rational and art emotional is not adequate because both entail the total operation of the human being in the particular braidings of emotioning and languaging, that art and science are, as networks of conversations."

A Student's Prayer

The world of your truth can be my limitation;

Your wisdom my negation.

Don't instruct me; lets walk together.

Let my riches begin where your's end.

Show me so that I can stand

On your shoulders.

H.M.

United States Department of Peace Campaign

www.ThePeaceAlliance.com

Dr. Elise Boulding, Professor Emeritus of Sociology at Dartmouth College and Former Secretary General of the International Peace Research Association supports the United States Department of Peace. Like all of the thousands, perhaps hundreds of thousands, of peacebuilders who are truly making a difference, Dr. Boulding has primarily focused on what's right with the world. Rather than opposing war, she has studied what can be done to prevent it—how to resolve conflicts without fighting.

She was a member of the congressional commission, appointed by ex-President Jimmy Carter, to facilitate hearings throughout the USA regarding a National Peace Institute in 1979-80, and served as a founding board member of the United Nations Tokyo University. These hearings eventually led to the establishment of the U.S. Institute of Peace.

Elise Boulding has been an important peace activist since World War II. Author of eleven books (see book list <http://netmar.com/~maat/archive/feb1/boulding.htm>) and a contributor to many more, she built the Peace Studies program at Dartmouth College, and both she and her husband, Dr. Kenneth Boulding, have been active all their lives in conflict-resolution studies. They have been long-time supporters of groups that have been working for world peace.

Elise Boulding spent the mid-nineties writing *Cultures of Peace: The Hidden Side of History* and she still makes her peaceful presence felt in the corridors of power. Dot Maver, Executive Director of The Peace Alliance and Pat Simon, State Co-Coordinator met with Elise in her home in Massachusetts where she endorsed the US Department of Peace. She emphasized that:

“There is a need for a Department of Peace to be responsible to build up a cadre of staff who are multi-lingual, multi-cultural, who know history and can build a capacity for diplomacy.”

True Power:

Conscious Evolution through the Evolution of Consciousness

By Hina Pendle, Ph.D.

As a culture, western civilization focuses its attention on outer world challenges. Matter matters. Many of us want to fix the environment and the body politic, feed the hungry, house the poor and provide justice for all. These are worthy values and goals. However successful these efforts may appear to be, they won't be sustainable because we aren't getting to the heart of the matter—literally and figuratively. We have well-developed outer muscles; witness the military, financial and prison systems as the most visible and caustic. What is not generally well understood is the source of all these actions—our individual and collective state of consciousness. The only way to make the shift away from extinction to the magnificent life we hope for, dream of and know is possible, is to develop our inner muscles. That is, using our True Power.

Are we ready?

We are living in a time that is so fearful, anger-driven and divisive. I talk to so many well-intentioned people who are skeptical and cynical. We have to break that spell or we are doomed to live it. What if all the people and systems that we blame as responsible for the current destructive state-of-affairs somehow fail or fall apart? Are we then ready and prepared to take their place? Would we be a new heart-centered humanity? I am afraid not. At this point, we would only recreate the mess we're in. Historically, victims become the perpetrators as soon as they wrest control. This is one pattern we have to stop—personally, interpersonally and collectively.

How do we unravel the trance of conditioning and old patterns that we are drowning in? Where are the maps, technology and vocabulary to identify pain and shift to joy? How do we tap into our True Power? The only way we can begin is one person at a time. We have the power to change our perspective, wake ourselves up from our numbing slumber. We begin with the power of one. Then everything is possible.

World work

Individual enlightenment is world work. Every time you avert a potential misstep with someone, you have changed consciousness for both of you. How can you access your True Power, expand your level of consciousness to cross the Grand Transition from the pain of separateness into the joy of a unified field? There are five Unifying Principles and Practices at the core of the True Power work.

Unifying Principles & Practices

1. Expanding Awareness: Inner and outer awareness is the key practice to raising consciousness. Observing your thoughts, emotions and behavior moment to moment opens you to the ability to choose reactions and responses consciously. Accessing your True Power is a life-long learning. Using everything and everyone you encounter to expand your awareness.

2. Asking Bigger Questions: We only hear the answers to questions that we ask. Ask bigger questions to get bigger answers. Making this inquiry a practice, you can challenge the status quo inside of you or the circumstances you find yourself in.

3. Recognizing Value: We are accustomed to recognize problems and judge shortcomings. Put in another mental track, create the habit of appreciation, recognizing what is valuable to you. Develop the gratitude attitude.

4. Operating in Wholeness and Wellness: We are all part of an interconnecting whole. Anything affecting one part of the system affects the whole system. Chaos theory tells us, if a butterfly flaps its wings in California, a storm will be felt in China.

5. Agape: Agape is the quality of universal love. It is the ability to see the beauty within each person; to embrace and honor each other's humanness however it expresses itself. Encouraging authenticity in ourselves and others allows us to let go of our fears in relating to one another.

True Power practices support creating new, conscious patterns of interconnectedness that foster egalitarian relationships. How do we maintain a level of consciousness and skill that keeps us productive and safe in any environment? Becoming aware of how we use our power helps us discern when we are empowering dialog or disempowering it. True Power is the virus that can shift consciousness toward world peace.

There are True Power workshops that begin with a simple framework, the Seven Realms of Power, to guide our understanding of our own patterns. To find out more about this work and the schedule of workshops:

Voice: 831-662-2232
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www.true-power.blogspot.com

Dr., Hina Pendle: Facilitation, Consulting, Community Conversations

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You are invited to join us as a member of the ASCD sponsored **Systems Thinking and Chaos Theory Network**

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Please check your address label to see if it is time to renew your membership!.

*There are no unnatural or supernatural
phenomena, only very large gaps in our
knowledge of what is natural. We should
strive to fill those gaps of ignorance.*

*Edgar Mitchell
Apollo 14 Astronaut*

PATTERNS
ASCD/ASC Newsletter
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