

# Closing the Feedback Loop between Matter and Mind

*Conversation with Dr. Peter M. Senge, MIT Center For Organizational Learning, May 15, 1996*

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Claus Otto Scharmer

**COS:** Peter, what underlying questions does your work address?

## I. Is it possible to have institutional wisdom?

**Peter Senge:** It seems to me that deep down the deepest questions for me have to do with the conscious evolution of human systems, because my own belief is that we have evolved in a very unbalanced way. We have extraordinary technology. We have extraordinary power. We can influence the world in incredible ways, both on large scale and on microscale. We can set off nuclear bombs all around the world and alter the weather, we can alter the genetic structure, we can alter the dynamics of evolution itself. That's extraordinary power, and **it seems to me that with power has to go wisdom, and there's no evidence at all that, particularly collectively, we have any wisdom at all.** In fact, you might argue that social systems, human systems, the systems which are exercising this power institutionally, are if anything more blind than they ever were. Certainly they are not more intelligent. This has always seemed to me a profound problem, like giving the child a bigger and bigger hammer but no maturity to go with it.

These have always been the deeper questions for me. And in relation to organizations, is it really possible to enhance organizational intelligence or institutional intelligence, the capacity collectively to understand, to have institutional wisdom, wisdom defined as having a deeper understanding of the longer term consequences of action? That's a simple way to define it, but it's certainly, I think, consistent with many notions of wisdom. And how do you develop that capacity institutionally? The reason I emphasize institutionally is because most power is exercised institutionally. It's not just an individual researcher who could split a DNA molecule. It's all the resources that are required to support individual researchers splitting a DNA molecule. Likewise it isn't just you and me as individuals driving our automobiles producing carbon dioxide. It's the whole infrastructure of production and consumption and gasoline production. These are all multi-institutional or inter-institutional processes, so consequently the development of knowledge, understanding, and wisdom needs to be at the institutional and inter-institutional level.

So those have always been the deeper questions. You know this story, Otto, because I've said it before, and it's even in *The Fifth Discipline*. I've never had any particular interest in business. It seemed to me that you needed to have a domain to learn about this kind of learning where you got enough feedback from various efforts to alter or improve things that you could actually learn something — and it didn't seem to be business. So you might say, "Well, you should get together all the representatives of the transportation system worldwide and bring about this change since you're going to need different ways of getting people from point A to point B that doesn't produce as much carbon dioxide emissions." But I don't see any hope at all of actually learning anything about that, because it's so difficult and unlikely to achieve anything. You have to find something that's just complicated and challenging enough to be beyond existing documented capabilities, and yet have the dynamic complexity, the behavioral complexity, and the institutional complexity that is really representative of the driving forces that determine the conditions in the world.

That is where I could see my interest in how you create real space, the climate and conditions for learning. A lot of my most powerful experiences in this work have been training experiences in educational settings. I have seen what is possible so many times, that you can really create a space where people have very deep experiences of themselves and one another and what it means to be alive and what it means to be open

and the profound mystery of life — and the revitalization that occurs to human beings when they have those experiences.

## **II. I've been amazed by people's capacity to face the truth**

I once asked Karl-Henrik Robert what led him to feel that he could really do this crazy Natural Step. Obviously there was his scientific training, and there was his concern for the environment, and his belief that there ought to be a foundation of consensus from the scientific community. But there was something in the story he told which really struck me, and I realize there is a direct parallel to my own experience. He said, "I've been doing research on cancer for most of my professional career, and I have dealt with hundreds of families facing cancer. You know, dealing with the parents of children with cancer, and a husband having to deal with the cancer that his wife has or vice versa, or parents having to deal with the cancer of their parents." And he said, "The thing that's always amazed me is the incredible reserves that the human being has. You tell people these incredibly difficult things and you know how strong the psychological forces of denial are. I've always been amazed at how weak those forces really are compared to people's capacity to face the truth and really work together as families, as loved ones, facing absolutely the worst, most horrible situations you can imagine."

And it was really clear when he told that story that those experiences built up a belief that there are reservoirs of strength that exist within human beings when they really have to face something difficult. In some sense you might say the corollary of this is that we exhibit our weakness when we have to face trivial things, things where the stakes aren't that important. I think that same kind of experience has been affecting me for years. I don't think that anybody could realize the cumulative effect of leading the Leadership and Mastery course 250 or 300 times and seeing again and again these incredible moments of quiet, of people really being present together. I don't even have words for it. The experience of the course is much more powerful than words.

In that Champions Workshop last Summer that Fred [Kofman] and I led, people were sitting around a campfire telling these incredible stories. Now Joe Jaworski expresses it by saying, "You know, I've now worked with senior executives enough to know that when you can get people into a place where they are really safe and they are really quiet, all they really care about is their destiny, their potential, being who they could be." All the business stuff just fades into the background. If you can really give people an opportunity to connect to their sense of life's journey and their own personal destiny, their sense of purpose in life, then they can look at their institution or organization and there is nothing that they cannot face, because they have tapped into those reserves.

## **Uncovering the deeper aspect of the human condition**

So that's really been an overarching question, how you begin to help people collectively, in an organizational or institutional setting, tap into the real reserves that exist for profound learning, for profound change, for facing things which seem insoluble, impossible to alter, the way things are, and the way things always will be. For example, many people would say "human beings are basically self-centered. They only care about their self-interest and fundamentally are materialistic, and that's why society is the way it is." The way things are. But, of course, it's just a mental model and, in the right setting, people confront that and they experience something different. They experience real generosity, generativeness, and a deep belief that the future is not for eternity. So that's been the key question all along. How do you begin to release that kind of energy collectively? And that's why all the workshops are so powerful, because they become like small microcosms. When we started teaching the [MIT] Five-Day Course, we were very explicit. We wanted this course to be bigger, because Fred [Kofman], Bill [Isaacs], and I had learned a lot about what you can do in face-to-face interactions. If you get enough people together for three or four days and there are enough real personal conversations, you can create a kind of collective intimacy that grows out of those interactions. But you can't build that trust when you are dealing with hundreds or thousands or hundreds of thousands of people in an organization. You can't build that kind of trust just face to face. It will have to be almost more of transpersonal intimacy than an interpersonal intimacy. I guess my overarching question or hypothesis is that I really think it's possible to release and sustain that kind of energy, and that peoples' lives, in whatever work settings they are operating in, could be continually infused with this kind of generative energy. Because it just comes from us, or it comes from wherever it comes from, and comes through us. It is clearly an aspect of the human condition. It is not conjecture, and it is not new. It's just that

I think our industrial age has worked to create a more and more insidious oppression of that generative capability.

### III. Our systems of thought supersede life itself

Did you ever see David Bohm's little book *Changing Consciousness*? It's a little photo book. It's one of the last things he got written before he died, and it doesn't have a lot of text in it. It has probably only got 40 or 50 pages worth of text. He did it with a photojournalist, a man who had just basically taken pictures of people all around the world. It's a very powerful book. I have a couple of copies at home. It's out of print now. It didn't sell very many copies. It has David's text about the way collective thought evolves, the role of culture in creating deep imprints in thought, and the effect this all has on our experience of life. What is so powerful is the juxtaposition of the pictures of people from the indigenous cultures and the advanced and industrial cultures. It really starts to hit you after a while. People in the advanced cultures really don't look happy, and the people from the primitive cultures really look happy.

We really have no idea what we have lost in the industrial age. I think that the profound unhappiness of the industrial age is invisible to us. When you spend time with people in Africa, there is a different energy. We used to have a joke in *Leadership and Mastery*. For about three years, we had an exchange with a group in Uganda that was developing villages using all the same tools: vision, systems thinking. I saw pictures of people who wrote their visions on their huts, and the people who did this work in Uganda were middle-level professionals. Typically, they came out of the city, but they worked in the countryside in villages, and every year about four or five would come to the United States for four to six weeks of intensive training and then go back to Uganda. We always used to compete, those of us who taught *Leadership and Mastery*, for getting to teach the courses with the Ugandans, because we had a saying that when the Ugandans were there, there was a light in the room, and you could see it in the way they smiled. It was the darnedest thing. You see, they smiled differently. The first time I met Louis van der Merwe, from South Africa, I told him about the Ugandans. I said, "They smiled differently. It's like they smile fully. It's like all of them smiles!" And Louis laughed and he laughed, and he said, "Peter, you have to remember that they never met John Calvin."

I'll never forget that line. They never met John Calvin. Because this kind of rigid right/wrong, this imposition of an arbitrary, fundamentally dualistic lens on life misses the real essence of life — the mystery, the unresolved, the dynamics, the messiness of real life. That lens does not exist with indigenous cultures. Their consciousness and their awareness of nature are interconnected. Yes, they have rites and rituals, and they have dogma of sorts, but it's held in a different way, in ways that we almost can't even appreciate. I think it never supersedes life itself. Our systems of thought supersede life itself, so it's not vitalizing energy — you know, life itself — and we've lost. I think that if we can't rediscover that, we have no hope of ever developing the wisdom and the understanding that is going to be commensurate with our power. We're not going to go back to becoming indigenous cultures, but **there is something that human beings have a capacity for that, if we don't tap, our power will annihilate us. I really do think that there is not much hope for that.**

### IV. Matter and Mind: There's Only One Issue in the World

I had an interesting conversation a year ago with Mr. Nan, the Chinese Zen master who lives in Hong Kong. I have got a lot of his books around here. Showing Young made it possible for me to meet him. In China he's a very revered figure. He's considered an extraordinary scholar because of his integration of Buddhism, Taoism, and Confucianism. When I started talking with him about this, he had a very interesting way of putting it. I asked him if he thought that the industrial age was going to create such environmental problems that we would destroy ourselves and that we had to find a way to understand these problems and change industrial institutions. And he didn't completely agree with that. It wasn't the way he saw it. He saw it at a deeper level, and he said, "There's only one issue in the world. It's the reintegration of mind and matter." That's exactly what he said to me, the reintegration of mind and matter. I think that this kind of experience of life being predominant, being more powerful — not our mind being more powerful than life itself — is another way of saying that. It's consistent with Bohm's theory of dialogue, and it's why Bohm and Krishnamurti influenced each other so much. Most esoteric, spiritual traditions believe that there really is no fundamental distinction between consciousness and what is manifest. There is this continual interplay in the two of them. As Bohm used to say, "Thought creates the world." I think it's that kind of capacity or awareness or reintegration that needs to be infused into our institutions.

**COS:** How does the separation of mind and matter relate to our world of organizations and organizational theories?

### **Thought creates organizations, and then organizations hold humans prisoner**

**Peter Senge:** Well, there's obviously a much more profound way to say this, but we basically create organizations, which are like matter. They are manifest, right? Rules, regulations, structures. And **then, we become prisoners of those organizations.** So you can see how disintegrating this is.

First off, we often don't take any responsibility for what we have created, which is obviously patently absurd at some level. Organizations work the way they work because human beings create them that way! It isn't the laws of physics. And then people's baseline reality, what they often report, is that "the system is doing it to me. Our reward systems are killing us. Our strategy is no good." It's always something external to me, some thing which is now imposing itself on me. So you might very well say, "Thought creates organizations, and then organizations hold human beings prisoner," or as David Bohm used to say, "Thought creates the world and then says 'I didn't do it.'" One very simple way to think about everything we are doing is to just take that simple aphorism of Bohm's and say, "Thought creates the world"; and then what if it says, "I did it"? That would be the reintegration of mind and matter. That would be like saying, "Oh! Our organizational systems are ridiculous. How did we create these?" **To me, the essence of what systems thinking is all about is people beginning to consciously discover and conceptually explain and account for how their own patterns of thought and interaction, often very habitual and unaware patterns, patterns that we haven't ever reflected on, manifest on a large scale, and create the very forces which the organization then 'is doing it to me.' And then they complete that feedback loop, and the most profound experiences I've ever had in consulting have always been when people suddenly go, "Holy cow! Look what we are doing to ourselves!" And I have literally heard people say things like that. Look what we are doing to ourselves. Given the way we operate, no wonder we can't win! And what is always significant to me, in those moments, is the we. Not "you," not "them," but we.**

How collectively to learn to take responsibility for the conditions we have created The difficulty here is that until individuals take responsibility for their own life experience, or at least their experience of their experience, little deep change is possible. The challenge, when you are dealing with larger-scale human systems, is that collectively people have to take some responsibility. I think it's a perfect parallel to that therapeutic axiom that **a person can see awful things that have happened to them in their life, but until they see their own part, they can never escape a victimology mindset, and a victim mind certainly cannot generate any real creative energies for change.** De Maree used this term sociotherapy. From the standpoint of the purpose or intent or the theory of change, it is probably exactly right. It's how we collectively learn to take responsibility for the conditions we have created. The trick in that statement is that it is so easy to espouse responsibility and not actually experience it. That is why I think the conceptual tools of system dynamics, when used artfully, are extraordinarily powerful, because they become one way for people to actually construct a theory that explains their own predicament in terms of their own behavior. It doesn't rule out external forces, but usually you can never fully account for your predicament through external forces.

Often different companies have the same external forces and yet produce very different consequences. Why? Because their internal structures — their mental, cognitive, emotional, behavioral, organizational structures — differ. It is why one person can grow up in abject poverty and become enlightened and 99 other people grow up in abject poverty and become lifelong victims. The conditions are the same, but something has enabled one individual to process and interpret and enact different behaviors in the same conditions. The systems perspective is really fundamentally all about discovering the way we create our own reality. We are trying to understand how we together are creating a lot of our own problems and, consequently, how we together might have the power to create something very different. It connects very directly to the particular philosophy of organizational learning that I feel our work grows out of, which is, at its root, a systemic philosophy. Now it had different tools. There are system dynamics tools, conceptual tools, there are dialogic tools which are more like ontological tools perhaps.

**COS:** More like what?

**Peter Senge:** Ontological or epistemological tools — you know, how people reflect on how they construct their explanations of reality — or behavioral tools a la Chris Argyris, where people can really get serious about how their own behaviors in face-to-face relations undermine them, or tools that are about aspiration and releasing our dreams as a force. Those are all at the level of methodology, but that's why I use the term. **That is the way I would describe or define a true systems philosophy, which is one that closes the feedback loop between the human being, their experience of reality, and their sense of participation in that whole cycle of experience.** That's why Francisco Varela is a systems thinker and why people who have totally different methodologies and maybe even different particular goals are still basically coming from a fundamentally similar ontological perspective. One way to think about reality is that it's interactive. There is nothing that is occurring in matter that is fundamentally inseparable from mind. So I think Mr. Nan is probably right. That is the issue behind all the issues.

**COS:** I have been here for one and a half years, but it has never been so clear as in this moment when you described what systems thinking is really about, what your work is really addressing. That is, as I understood it, to provide a tool, a help or a vehicle for completing the circle from experience and behavior back to the cause.

**Peter Senge:** I don't think I've ever thought about it quite this way. They are good questions.

## V. You can't understand a system unless you create it

**COS:** When I talked with Chris Argyris he sort of paraphrased Kurt Lewin's sentence, "You can't understand a system unless you change it." He did not actually say this, but he could have said "You can't understand a system unless you create it". Before this conversation, if I were to have to chosen a phrase to describe your work, I would have chosen that one, because the way I see you work is not just to study any set of given data, but rather to create new "data" which can then lead to a new theory or a new kind of research.

**Peter Senge:** I agree with that completely. **It's a logical extension of what we are talking about in the sense that the core premise of Western science for three or four hundred years has been that reality exists separate from us as human beings.** So we can study it. We can understand its laws. Notice that it is always an "it." We can learn how to manipulate and control things, and of course that premise starts to break down in the 20th century. It seems to me that you can now take logic and extend it one step further and say that there might be a whole new way of approaching science, which is not to study what is, but to consciously attempt to create what might be. If it is interactive anyhow, not fixed and always evolving; maybe that is actually closer to what we really do if we participate in its generation. And maybe we can learn to do that in more conscious, thoughtful, and rigorous ways. So it is now possible to say very succinctly what we are doing at the Learning Center, and in a way that I don't think we have ever been able to say it. **It is really simple: to consciously attempt to create learning communities as a way of understanding learning communities.**

**COS:** Say that again?

**Peter Senge:** To consciously attempt to create learning communities in order to understand learning communities. It represents a particular approach to science, to constantly try to bring something into reality, and we are conscious that it has a couple of operational definitions. There are theories and methods, which are explicitly being used. You continue to reflect on your assumptions and your experience as you are doing it, and you see the process itself as being one of increasing consciousness. So one of your measures of success is that you are more conscious rather than less conscious as a result of participating in it. That becomes a very interesting kind of theory of a type of scientific practice, to attempt to consciously create new realities as a way of understanding the dynamics of those realities. It's like the creative arts in that regard. You can't understand sonatas unless you can create sonatas. You analyze and analyze, but then you must create sonatas. Until you have mastered sonata form, you cannot change sonata form, so you must create it and create it often in almost a mechanical way until you begin to internalize it, and then it naturally transcends itself, and you start creating something new.

So there is a theory, there is a method, there is a conscious approach, and yet something new can emerge that perhaps has never emerged before. It's very close to the ancient ideas of discipline. **At a deeper level what discipline is all about is this kind of approach to creating**, the mastery of theory and method, and doing something again and again and again. If we were really serious about system dynamics, for example,

we might have students practice like you would practice a martial art — you know, a particular move — 5,000 or 10,000 times until it is absolutely mastered. A lot of people in the West don't understand that. They think, "Well, they are going to become like a robot." That's absolutely right — so you can become more conscious. You can actually observe yourself doing it with no thought at all about the mechanics of doing it, but in that observing you can also observe the mechanics. **It seems to me it is very consistent with this notion that the way to really understand is to consciously try to bring something into reality. That's a different kind of science,** but it seems to me that if we are interacting with it anyhow, or have been doing it all along, we have been kidding ourselves, at least about some things.

Social reality is probably a lot like quantum reality, because you can't observe without affecting it. Well, if you can't observe without affecting it, then maybe you should put all your cards on the table and say, "We want to create something, and we may be wrong about what we want to create, but we will consciously attempt to create it and study ourselves as we are doing it. We will never create it exactly like we intended, because our understanding was too inadequate." The way to understand what wants to be created is to try to create it and then see what emerges. That is like Alan Kay's old idea about being a forcing function for change. I don't know if he told you the story of the dynabook — wonderful story. He said that when they were doing the work at Xerox Park, they had a vision. The vision turned out to be wrong. They wanted to create a dynabook. It would be just like a book. You could carry it with you every place, and it would be completely interactive. And he said, "You know, we failed completely. The machines we built were big. You couldn't carry them anyplace. If you dropped them on the ground, they broke." But that vision and having to create something that was such a stretch led to all kinds of breakthroughs like the Macintosh user interface, which was probably their most important creation, along with integrating a lot of component technologies that had been around. The mouse had been around for awhile, and other things had been around. I always thought that was a wonderful example of the real creative scientific enterprise, where you really try to create something and, at some level, it doesn't matter if it's right or wrong, because what really is able to emerge is whatever is able to emerge. You don't know what that is. They didn't predict the personal computer industry, they didn't predict Macintosh, but they did have a very clear vision. The spirit of the essence of the creative arts is to understand the power of vision and the limitation of vision.

Robert Fritz always had this wonderful way of putting this. He said, **"It's not what the vision is, it's what the vision does."** You don't judge your success by whether it turned out exactly the way you planned. You really should judge your success by what was accomplished and what was altered as a way of accomplishing it.

### **Transsubjective Intimacy**

**COS:** You made this distinction between intersubjective intimacy and transsubjective intimacy. I would like you to elaborate a little bit on this distinction and also what this distinction might mean for larger systems.

**Peter Senge:** I think intimacy is an interesting concept to work with to think about this, because first off it's unusual. We don't use the word intimacy in concert with the word organization very often! But I think intimacy is a very real human experience. It has to do with safety, a kind of privacy, the sanctity of one's own experience, a reverence for what is small and immediate and experientially real. I think that most of our experiences of intimacy come in one-on-one relationships or maybe small teams. Very often in really exceptional teams, people will say, "We really have gotten to know each other. In many ways, these people know me better than my wife knows me," because they've lived through difficult times, they've lived through stress, they've had to become very vulnerable with one another and so on. I think the experience of intimacy transcends circumstance. I think you can be intimate with life. What I meant when I talked about "transpersonal" [or "transsubjective"] intimacy" is a kind of a metaphor at one level, but also a very real experience at another.

I mean it as a metaphor in the following sense: if a hundred people can be together for a few days and don't learn each other's names, or get to know each other personally, and can still leave with a feeling of a genuine experience of intimacy, then something interesting has happened. One, you have discovered a capacity for this kind of safe, reverent human condition in a setting where it would not be normally expected. Second, you cannot attribute it in any simple way to "the people I talked to and what they did and how they felt and they were nice and they listened to me"; listening would be a good example of this. **We often create intimacy through our listening, but at an interpersonal and not a transpersonal level, beyond any particular pair or small group.**

A very simple way to characterize some aspect of my own vision is to imagine that you could go anywhere in the world and feel at home. It would be different and maybe unsettling, but life is often unsettling. You were in the "home" of humankind or even more, you were in the "home" of life or the universe. It seems to me this has been one of the fundamental aspirations of spiritual disciplines for as long as there have been spiritual disciplines, for people to develop that kind of grounding experience of life so they were at home or they were present or they were safe. Who was the famous Christian from the 11th or 12th century who was confined for 20 or 30 years in a cell that was three or four feet square and wrote about ecstasy? So it is quite clear that conditions are just conditions.

### **Fear drives our institutions**

The idea of a hundred-person course that produces intimacy as a metaphor...people could actually experience that, they have experienced being safe and at home in a setting where they can't explain it based on interpersonal interactions, so that just maybe this is something that is possible on a larger scale. Just maybe I can be part of a larger organization and not feel fundamentally fearful. I think most of the time there is a deep emotion for many of us of fear. I think Demming was absolutely right. The dominant emotion of what he would call the pervading system of management, the emotion from which it derives most of its energy and capability — because all that emotion means at some level is a source of energy, a predisposition to action, e-motion — is fear. I think fear drives our institutions. Fear of failure, fear of being embarrassed, fear of not getting a promotion, fear of ...

**COS:** ... getting kicked out.

**Peter Senge:** Getting kicked out, losing one's job. It starts in school. Fear of not being accepted. So that's a very sad state of affairs. That would explain a lot about why people in those pictures in Bohm's book don't look too happy, and I don't think that is a law of the universe. Why couldn't joy be the dominant emotion of a society? I don't know any reason. Fear then would become circumstantial in situations where it was appropriate to be fearful, but it wouldn't be the pervasive fear of death.

It seems to me that in the evolution of human communities, a real significant stage occurred when it became possible to have a community that wasn't fundamentally driven by the fear of death, but death just became one particular circumstance. It might be appropriate to be fearful of it, but it might not have to be pervasive. It's so odd. I mean, when you really think about it, it is bizarre. We regard experiences like joy, ecstasy, and peacefulness as odd. We really see them as unusual! Usually we explain them by some circumstance — a drug, a promotion. Think about it! It's our whole culture laid out in front of us. What we define as odd versus what we define as normal. **We define anxiety as normal and joy as odd.** That's bizarre. That's a testament to the industrial age. We have no idea of the price we have paid and continue to pay.

Now some people like David Bohm would argue that it's been a progressive process. The critical break point occurred in the beginnings of the agricultural era, when nature became something that we had to make subservient, to control. The basic fragmentation was there, and all that happened in the last three or four hundred years is a kind of acceleration of the process, to the Western scientific world view and technology and industrialization. It's so striking when you think about it. We still carry the genetic heritage of 90% of our experience as a species, because the agriculture era is still very, very recent. Consequently, very few human beings actually prefer anxiety to joy. That's our genetic heritage. It would suggest that perhaps we really did have more of an experience once upon a time. They regarded joy and ecstasy and peacefulness as normal and anxiety and fear as situational. We now have got it reversed completely, and the very fact that you could ask 99% of human beings in the world what they would genuinely prefer — "Do you prefer happiness to fear?" Then you ask, "Well, then how come happiness is relatively rare — real happiness — and fear is relatively common?" That might suggest that we have lost our way.

Buddhists have a very particular way of understanding this which is, of all the religious systems I know of, the simplest and probably the most powerful. **They say that the root of suffering is attachment, and the root of attachment is desire. And what our modern society does is it inculcates and cultivates desires which then become attachments which then produce suffering, and that in some sense the journey of enlightenment is a painful journey, because it's about giving up desire and pleasure.** We have been taught that one thing is more important than another. See? That's fragmentation. Life is life, and the real roots of joyfulness are in life. It's differentiated, not circumstantial. You know, water is water. It doesn't matter if it's

green or blue or purple, it's still water. Life is life. It doesn't matter if it's situationally pleasant or unpleasant. So I think that's a very deep understanding. At least for me personally it's very meaningful. If you can convince someone that one thing is more important than another and if, secondly, the thing that's more important is harder to achieve and you can convince them of those two premises, then you can make fear the dominant emotion, because then you will always be fearful of not having it, of losing it.

**COS:** Peter, what do you do when you facilitate workshops and co-create situations of large group transpersonal intimacy in large groups?

## **VI. The music doesn't come from the violin**

**Peter Senge:** I'll give you an instrumental response. You have various exercises, tools, methods, and processes which you have developed over time and have some reliability. To create music, you have to have violins. You have to have instruments, okay? But the music doesn't come from the violin. The violin is an instrument. For me, at an experiential level, I create that reality in my own consciousness, and then I play the instruments. I'll tell you what it feels like: you just have a helluva lot of fun. I just really, really enjoy myself, and I just kind of fall into my love of the people. And I know when I'm doing those programs, at some level nothing can go wrong. No matter what happens, it's exactly what needs to happen right then. Now I don't always feel that way, but I know when that kind of state develops. This is traditionally what in the Christian tradition we call a state of grace, because I think there is a deep understanding of this in the mystic Christian tradition. It's just so much fun. That doesn't mean it's always happy. Sometimes it's very intense, but you literally have the experience that absolutely nothing could possibly go wrong. That doesn't mean it always turns out according to my plan. It means that whatever turns out is exactly what is right in that moment, and that is the music.

**So, literally, just as the music doesn't come from the violin, the experience of this kind of intimacy does not come from the instruments of the tools and methods.** A good violin makes a big difference, and good tools, processes, and learning methods make a big difference. When we are leading the course, we say a good rule of thumb is that the quality of the relationship between the people will have a bigger impact than the good articulation of the presenters.

**COS:** Between which people?

### **Because love is about presence. Its about showing up and being present.**

**Peter Senge:** Say that two people are facilitating. The single most important, generative feature is the quality of that relationship. Now there could be a lot of problems in the relationship. Again, it's not about good or bad, but there is virtually nothing that is undiscussable, that whatever problem is a problem, you can love that problem. And that is really what I would consider a really high-quality relationship. It's not a smooth relationship. It's a relationship with a lot of presence, being or consciousness, that you can be present with whatever is there together. **To me, that's the essence of a loving relationship, because love is about presence. It's about showing up and being present.** I know I can lead that program really well with some people, even people with whom I haven't done it a lot, because there is such a relationship between us. It can even be a mutually acknowledged difficult relationship. We might have points of friction where we really aggravate one another, where we are critical of one another — seriously critical — and yet deeper, there is a real love, and the love is bigger than the criticism.

We had a colloquium for about two years here involving Chris Argyris and Don Schon and Ed Schein. It was a wonderful group of people, and we had a particularly difficult meeting. It ended with a lot of not-terrific feelings. People were a little bit angry, and probably some people felt a little manipulated, and the trust level wasn't real clear to people. But it was real! One thing about that group was that people didn't hold a lot back. Whatever was there came out. After the meeting, about four or five of us sat around and just talked. Chris was there, and he asked, "Peter, in your work with organizations, what do you think really, ultimately allows things to work?" And I said, "Well, you know, when I really think about it, to me I guess the most important thing is love. If there isn't a real relationship of love among the people doing the work — like a client and consultant — I don't think much can be achieved." We talked a lot about what that meant. We weren't talking about affection, or even about positive feelings, but about this capacity in people to really be present together and genuinely support one another — what you might call a deeper positive regard. Like I

might hate a lot of stuff you do, but I can recognize it as what you do right now, but at a deeper level, I really do have a positive regard for you in my heart, and together we can be present. And Chris and I proceeded to have the most interesting conversation. I wish it had been taped, because it would floor a lot of people who have read Chris Argyris's writings over the years. We talked about love and consulting, and Chris said, "You know, I agree with you completely. I know exactly what you mean. I really think that often the thing that really makes a difference in the successful work with a client is love."

We agreed that this was very difficult to talk about, because of course in English we only have one word: love. We don't have "agape" and "eros." We don't have distinctions which other cultures have had for a long time. Why don't we have those distinctions? Obviously because they have lost their functionality in our culture, because there is a huge difference between desire and love. But not in our culture. We pretty much define love as desire, but we weren't talking about desire. We were talking about this really deep capacity to be present together in a spirit of mutual, deep, positive regard for one another. You could call that respect. It is definitely like respect, but I'll tell you that at times I have experienced not respecting some of the people that I have led the course with. So this is bigger than respect. Respect is at the level of conscious thought and feelings. You know, respect or disrespect often comes with anger. It comes with threat and fear. So love is beyond feelings. Love is not a feeling state. **Love is a state of consciousness beyond feelings.**

That was a fascinating conversation, and neither of us have ever figured out a way to talk about it publicly or write about it, because of these very reasons: it's very difficult to generate enough understanding in a listener or a reader of the reality or the experience of what you are talking about that would distinguish it from the way the word "love" is used. In my experience of doing a program like the Core Course, that's very real. There's also struggle and suffering and great difficulty, and there's fear that it won't turn out, but the fear isn't dominant. **I think there is a deeper force that's dominant, and that is what I would call this capacity to live in the world you want to create.**

Bob Fritz has a very simple principle. To me he is a real genius because one of the ways I define "genius" is the capacity to take profoundly complex, multifaceted, experiential realities and express them with great simplicity.

There is nothing more powerful in the creative process than knowing what you want to create

He said that there is nothing more powerful in the creative process than knowing what you want to create. So I think there is the instrumental explanation and then there's this deeper experience.

If you know what you want to create, then you can to some degree live in that space in your own consciousness. **There is no more powerful force than thought and reality, mind and matter.**

**COS:** How do we then address the problems that are not within organization, but rather between them?

## **VII. Infrastructures for Learning communities**

**Peter Senge:** A great deal of what we have been doing at the Center is experimenting — sometimes very thoughtfully and sometimes accidentally — in creating infrastructure for learning communities. What are the kinds of infrastructures that can support the development of learning communities? And learning communities, I think, is emerging in my mind as a more useful way to think about this kind of work than just learning organizations, precisely because of the point you make. Many of the real critical issues transcend organizational boundaries, so in many ways we're not interested in individual learning or team learning or even organizational learning, but rather interorganizational learning. The notion of learning communities becomes a more useful generic term, because there could be a learning community within an organization or there could be learning communities between organizations or there could be learning communities at all kinds of levels within a geographic regional community, like a city or a metropolitan, municipal region or within a nation or around the world. So learning community becomes a much more powerful image than learning organization.

Also, it's an older concept and, as you can tell from my comments before, I am always thinking about what the oldest thing in us is. Debashish Chatarjee was visiting a couple of months ago. He is the Fulbright scholar from India who is doing a lot of interesting work on organizational learning in India, and he said to me, again very simply and powerfully, "It's worth considering that those ideas which are the oldest might

have the most truth." We have a tendency in modern society to think that which is newest is the most important, and we tend to discount that which is oldest. But he said, "If you think about it, ideas that have been around for thousands and thousands of years have stood the test of time." Intelligent, wise people have tested them, and they have stuck around, whereas a lot of fads come and go. Some fads come and go in a year, and some fads come and go in a hundred years.

**It seems to me, that there is a tremendous hunger today for community.**

Industrialization may be a fad. The myth of progress that has embodied industrialization, this idea of steady, linear progress fueled by scientific knowledge and technological progress and increasing the economic standard of living, may turn out to be a fad, to have no deeper truth value and be extraordinarily problematic. I always thought that was very interesting, so I am always drawn to things that are old. That is why etymology is so interesting, because you can use it as a vehicle for a cultural anthropology or an archeology, digging down to the meaning of words. The notion of community is much older than the notion of organization. There seems to me, from my experience and from a lot of evidence in our work in the Learning Center, that there is a tremendous hunger today for community.

People profoundly miss this experience of being connected to one another beyond the immediate circumstances of their lives, and in the spirit or the service of something larger or more important than their own self. That is one way to define a community. Community doesn't just exist for convenience. Community exists for some larger reason. It is like that old statement, a very traditional definition of commitment: commitment is always to something larger than oneself. And I think self there is defined as "desires and needs."

An MIT professor, Eric Von Hippel, has done all of his research on product development and particularly how products are designed and defined. He is quite widely known in this area, and he's a very interesting man. He asked a question about two or three months ago in a conversation that really stunned me. It was so simple and so obvious, and yet I had never thought of it. The reason he asked this question is that his whole area of expertise is how radical, new ideas — product ideas, particularly — get established and then can't be killed off. He said, "Peter, what is it in the five or six years since you started the Learning Center that nobody has been able to stop?" It is such a brilliant question. He said, " — that is so robust that no matter how many mistakes you have made, no matter how much politics have come into play, no matter how many things have gone on there, nobody has been able to stop it?" And it suddenly hit me like a ton of bricks. You know, the greatest success of the Learning Center after five years is the Learning Center itself. It is the community. We have had several people lose their jobs because of this work. You might think that would kill the work in those organizations, because after all, someone knows somebody who worked on this organizational learning stuff, and it was all kind of interesting and maybe produced some interesting results, but when the person lost their job, nobody would touch that with a ten-foot pole. That's our theory of extrinsic reward, right? Well, do you know what? You can look at every one of those organizations where people lost their jobs and there are more people today, in some cases many, many more people today, doing the work than before those people lost their jobs. In fact, we've even had recent experience where in one company somebody literally did lose their job because nobody thought this work was worth anything, and then a year later, in the same part of the organization, somebody was promoted to a very senior position and said that the reason he was doing it was because of his work in organizational learning.

So that powerful question made me realize that what we have done, sometimes intentionally and sometimes accidentally, is to foster the development of learning communities, communities of people who feel a deep sense of mutual commitment, that sustain themselves over time. When we started the Learning Center the main focus was on the learning laboratories, which were very much focused on teams. Could we create infrastructure that would support a Team Learning, where learning and working could be integrated together? I still think that is a very important research question, but I also see now that it's learning infrastructure that has an impact on work teams. The problem becomes, "Well, how do you have any guarantee or any reason to believe that what happens in one team will spread more widely?" It's very clear now that this idea of learning communities is a larger level than just "team" and that infrastructure to support the development, sustainment, and growth of learning communities is very, very important.

## Learning Infrastructures

Now what is some of that infrastructure? Meetings. Getting large groups of people together. I think annual meetings are very important. I think the smaller meetings are very important. The five-day Core Course is big enough that a genuine experience of innovation, excitement, intimacy — any of those experiences — cannot be attributed to just, "Well, this person is great." Somehow something is going on amongst us. Probably information infrastructure will prove useful. Written material needs to get around to people. It turns out to be very important in developing communities. Newsletters are very important for communities. The Field Book has been very important for developing this community.

Eventually, hopefully, there will be ways in which researchers can write really good research papers that people can read and understand. It's still not clear to me that electronic media are more important than print media for building communities. Again, we tend to think that which is electronic is new and fancy, so it must be more important, but as Alan Kay pointed out to me years ago, "The computer still is infinitely inferior to a book in many ways." You get lost in a computer — you know, lost in hypertext and hyperspace — but in a book you can go to any page you want just like that, and you spatially know where that page is relative to the other pages. Computers can't do that yet. So it's still not clear to me that the printed word is not more powerful than the electronic word in communities, but if you go back, there is even an older medium for community building than the printed word — because the written word is still relatively recent — and, of course, that is stories.

**Historically, the most powerful medium whereby communities get built is through myths, and through stories.** See, that's what I think is so interesting about stories. Obviously, you can say, "Well, that's content, and you tell your story over electronic mail or in a book." **But telling one another our stories is a medium. Something happens when human beings tell each other their stories.** There is something where the message and the medium intertwine, because something very personal, intimate, and meaningful is created in storytelling.

Last year we had this extraordinary experience of putting on that three-day workshop for very senior-level people, the Champions Workshop, in that something really remarkable happened, and I have to say that it was one of the most profound personal experiences I have ever had in a workshop or a short learning experience.

It mainly happened because we sat around the campfire at night. We went to a very special place. It was very beautiful, and the workshop was designed very effectively. We had a lot of good instruments, a lot of good exercises. Fred Kofman led the program with me, and he's masterful at really drawing people into a very deep, reflective space and making it clear that it is relevant to a business. But the most powerful moments for all of us no one will ever forget. We had two evenings where we just sat around the campfire. We would ask very simple questions, just giving people a chance to talk about whatever they wanted to talk about basically. And I want to tell you, in two evenings of about two to three hours each, sitting under the stars, not a single person told a story about business, and they all had plenty of opportunities to. I really think that people felt extremely open and comfortable talking about whatever they wanted to talk about, but they all told stories about things that had happened to them in their lives.

What was so beautiful about these conversations was the extreme utter simplicity of them. People just asked questions and told stories that were so simple and so real in the sense of being directly their experience. They were free of all concept almost. It was amazing the kind of stories. They were like innocent children almost asking these incredibly simple, stupid questions. You really saw, in a very rare instance in our culture, storytelling as both content and medium. The act of telling our stories was a profound act.

I was talking with a woman at that workshop who is a very senior executive in one of the largest companies in the world. She's responsible for a 13 billion dollar business, okay? It was fascinating. The first thing she said when I talked to her on the phone about a month ago — and we had not seen each other or talked to each other since this program — was, "Wow. It seems like yesterday when we were together." It was something in our voices that knew each other's voices. It had nothing to do with what we were saying. It's like that old phrase about the baby and the mother's voice. Before we understand words as concepts, we understand voices, that's the medium. When we tell our stories, our voice comes through. It's interesting. Even in English, we still preserve that definition of "voice." Like a writer will say, "How do you find your

voice?" It's not the content. It's that direct communication from something deep within you and communicating directly.

I spent the last campfire session just listening with my eyes closed. I didn't have to look at who was speaking. I knew their voice, and I found that by listening with my eyes closed I heard things that I can't even put into words. There was something speaking. That is probably, as it has always been, the primary infrastructure for community building. Enabling people to tell their stories, to have their voice be heard. I think that in the five-day course, for example, if there were one exercise whose removal would cause problems, the one instrument that might be most critical, it would be the morning check-in, because every morning people sit in the circle and they go around and they check in. Very often people don't even want to end it. At the end of the course when you say, "By the way, this will be your last morning learning circle check-in," there is great sadness that they can't continue that. I think you begin to see the oldest form of community building, which is people sitting in a circle and each telling their little story.

**COS:** I was reminded of a conversation with Francisco Varela where he was talking about the single most important blind spot in his area of research. He said, "It's experience. In cognition research, we have a lot of stuff, but what we don't have is a methodology for experience." It came to mind that the organizational learning work is about reconnecting experience and cognition on the individual level with collective experience and institutional governance. That brings us back to the theme you described at the beginning, right?

### VIII. Experience, Truth, and Participatory Science

**Peter Senge:** Yes. An interesting way to think about this is "the truth." We've developed a notion of the truth from the industrial scientific era, which is "truth is scientific truth," truthful statements about the physical or manifest world. There is an older definition of truth, which is the truth of one's experience as experienced. That leads to some profound dilemmas, because experience can never be reduced to concept. So by that definition there can be no statement of truth conceptually, because that would be a flaw of logical type, and you can't make apples into oranges. You can't make experience into concept. So there really are very different kinds of notions of truth, and if we were going to put a label on it, which would be a bit of a contradiction in terms, there would be experiential truth and there would be conceptual truth.

One of the most interesting questions, and **it's a very old question, is can you embrace both of these notions of truth?** Experiential truth — that which never can be spoken in words, never reduced to words, but rather where the speaking, the act of speaking, the voice coming through — conveys the experiential truth. That's why nobody could tell you what happened in that circle and recreate it. You had to be there experiencing it directly. But if you could also embrace conceptual truth, then it's a possibility that you can have a kind of connection forming. At another level, experiential truth, meditative experience, any kind of experience cannot be reduced to concept, but if you can embrace the two, then you may actually be able to discover the truth!

There are incredible paradoxes in spiritual traditions, because people express ancient teachings as the truth. At another level it's a contradiction in terms. It is just concept, it's a teaching. The principle that people have understood for a long time which, again, has been lost in the modern era, is that what you are really expressing is this integration of the living and the experiential truth, the experience of a concept. If you can embrace both, then the concept that you can articulate can have a wholeness beyond the concept.

Then you start to realize, again, the fragmentation of the industrial scientific model, which is that the truth is something abstract, separate, it's disconnected from experience. Experience doesn't matter. In fact, experience can screw it up! That's called subjectivity. **You have to start to separate the experience world from the objectified world, and the objectified world is what you call truth, but I think it's just as false or just as incomplete to say that the truth is the experiential world, because human beings exist on multiple levels.** We exist at the conceptual level. Who you are, Otto Scharmer, at some level is an identity, is a personal history, is a story you tell about yourself, is a narrative. That's all concept, but it's not just concept if it's really continually fructified (I always loved that word). You know, vitalized by the experiential Otto Scharmer, the experience of your life at this moment. That is the integration which can allow a different kind of science, a different kind of truth. So, yes, without a discipline or methodology of experience, how do we think we can ever produce genuinely nurturing concepts or statements about reality? There's a hollowness to our traditional scientific world view. We have hollowed out the truth, the experiential truth.

## **Buckminster Fuller on science: to put the data of one's experience in order**

Years ago I heard a speech by Buckminster Fuller; then I corresponded with him, so I actually eventually got to know him. One of the things that he was very passionate about was that he absolutely detested the way the contemporary education system taught young children that they couldn't be scientists. You know, kids learn very early on that scientists are very important special people, usually are extraordinarily bright, almost always mathematical, very conceptual, and if I'm artistic, I can't be a scientist, right? I am an artist or I am a writer or I am just a practical person. And he absolutely hated this. He thought that it was one of the most destructive things that happens in education, because he was a dropout from school. He was somebody who was very unsuccessful in school. He dropped out of Harvard. He went for one year and dropped out. In many ways, it was a little similar to C. P. Snow's notion of two cultures, the insidiousness of this division of the humanities and the sciences. Bucky had the most wonderful definition of science. I've never forgotten it, and I realized that just a minute ago when we were talking that all I am really doing is giving voice to what I heard from him many, many years ago, so I want to acknowledge that. Buckminster Fuller's definition of science was to put the data of one's experience in order.

**COS:** Yes.

**Peter Senge:** Isn't that a beautiful, elegant definition? It honors experience. Without experience, there's no science, and it honors the desire to put into order, to make some conceptual sense out of it. From that definition — this is what he was so passionate about — **each and every human being was born to be a scientist.** He was so passionate about it. Buckminster Fuller was a wonderful, sweet man, just a gentle, gentle man. He wrote beautiful poetry, and of course he was a great inventor. He was a remarkable renaissance man. He had around 500 patents — I mean, he was incredible! He was a genius, except he hated it when people called him a genius. Once he was teaching a program, and I was in the audience. It was the only time I ever saw him get genuinely angry. I mean really angry. This guy stood up in the audience at the end of the third day of the course, and he said, "Mr. Fuller, everything you say is wonderful about what the human being can do and how the human being can really create a world that works for everyone" — which is one of Bucky's personal visions, a world that works for everyone; he continued, "But, look. You are an extraordinary person. What can an ordinary person do?" And I thought he was going to hit this guy. Now Buckminster Fuller was about five feet tall, and this guy was about six feet. He was livid! He was furious! He said, "I AM NOT an extraordinary person. I AM an ordinary person." And you really realized that this was not just some display of mock humility. This was his experience. In his experience, he was an absolutely ordinary person, and his definition of science was a science of an ordinary person.

When you connect that to his personal vision of a world that works for everyone, you realize the two are two sides of the same coin — that a world in which each and every human being, individually and collectively, experiences themselves as an "ordinary extraordinary" person creating a world that works for each and every person, and that nothing short of that would suffice. You couldn't have two classes of people, because what it means to be alive is to be able to put the data of your experience in order, to be able to integrate mind and matter, to be able to actually live in that fructifying cycle of experience and concept.

**COS:** Peter, thank you for this conversation.

## **IX. Reflection**

Senge's research interest concerns the conscious evolution of human and systems and how to help people collectively tap into the reserves that exist for profound learning and change. The mind and matter story of Master Nan opened the space for rearticulating the essence of systems thinking as relinking matter and mind in the social world: to help people and organizations close feedback loops between collectively enacted behavior and the consciousness of those who act. Science, when performed from this deeper perspective, focuses on bringing forth new realities, for "you can't understand a system unless you create it." Likewise, leadership, when performed from the same perspective, is about accessing and operating from a "deeper force" related to the "capacity to live in the world you want to create" and bringing your full self into the present moment, "because love is about presence. It's about showing up and being present." How can we, I wonder, develop this quality of presence and awareness across larger systems?

## **X. Bio**

Peter M. Senge is a Senior Lecturer at the Massachusetts Institute of Technology and Founding Chair of the Society for Organizational Learning (SoL). He authored *The Fifth Discipline* and co-authored *The Fifth Discipline Fieldbook*, *The Dance of Change*, and *Schools That Learn*. Senge's work articulates a cornerstone position of human values in the workplace; namely, that vision, purpose, reflectiveness, and systems thinking are essential if organizations are to realize their potentials.