I Love Chaos (and so should you)

By Bill Harris

Have you ever felt that some part of your life was in chaos? Have you ever felt that you were in chaos?

I thought so.

What if chaos, though, was your friend? What if the chaotic moments and situations of life turned out to be huge opportunities--that is, if you know how to take advantage of them?

What if, in fact, chaos turned out to be the best thing that could happen to you?

I know. Hard to believe. Chaos feels like the plague, doesn't it? But what if you discovered that it doesn't feel like the plague because it is the plague, but because of how you are responding to it. Perhaps there is a way to respond to it that changes it from something plague-like to something more like a diamond, or a pile of gold.

Perhaps.

Chaos is certainly a good description of what happens when you're pushed over your threshold. But remember that being pushed over your threshold is part of a process by which your threshold is raised higher--which is a very good thing.

Let's look at what occurs when this happens by looking at the third of my Nine Principles for Conscious Change, the Principle of Chaos and Reorganization (the first two being the Principle of Let Whatever Happens Be Okay and the Principle of Threshold).

This principle gives a most elegant explanation of how the whole world of the mind, the whole world of change, works; how the universe changes and evolves, moment by moment into an ever-changing, ever-unfolding mysterious something. In fact, this principle may just be (in disguise) a description of how God operates in the universe.

On the road to Damascus

For an example of this principle, I'm going to take you back about 2000 years, to biblical times. You've all probably heard the story of Saul of Tarsus on the road to Damascus, which is a story of extreme and instant transformation, of chaos and reorganization. Saul worked for the Romans and was kind of a bounty hunter. He hated the Nazarenes, who were early Christians, and after the death of Jesus he looked for opportunities to persecute them. He was so zealous in hunting them down that he asked to be allowed to go out of his usual territory--Palestine--to Damascus, to find more Nazarenes to bring back to Jerusalem to be put to death.

But on the road to Damascus, Saul is overcome by a light so bright that he's literally blinded and struck down, after which he hears the voice of God. His traveling companion leads him on to Damascus, where he sits, blinded and totally out of it, for three days. Finally, one of the Nazarenes appears and calls him Brother Saul. The Nazarene claims that he was sent by God. Instantly, Saul's eyesight returns, and right then and there he decides to become a Nazarene. In fact, he becomes the most influential and charismatic of the Nazarene preachers, St. Paul.

This is a clear example of a mental process we've all experienced, though probably not in such a life-transforming manner--a process in which a problem spontaneously solves itself, and something puzzling suddenly falls into place. Some call it the Eureka Event, after the tale of Archimedes, who, when asked by the king to determine how much gold was in a crown without melting it down, puzzled over the problem for some time, becoming very frustrated.

Finally, however, while taking a bath, Archimedes noticed that his body, when submerged, displaced a certain amount of water. He suddenly realized that finding out how much gold there was in the crown by finding out how much water it displaced would tell him the weight of the gold.

It's said that he was so absorbed in his euphoria, that he ran naked down the street shouting, "Eureka! I've found it!"

This sudden shift, this sudden transformation, has been called the "Ah ha!" moment. It could be called a flash of insight, creativity, having a brainstorm, turning on a light bulb in the brain, a felt shift, wordless knowing, a gut feeling, intuition, or by many other names. Whatever you call it, it's a feeling that something in the brain has been rearranged in a new way, that something old has passed away, and something new has been born.

How your brain says, "Ah ha!"

A number of very interesting things happen in the brain at such moments. The patterns and types of electrical waves sweeping through the brain are altered. Individual neurons in the cerebral cortex alter the number and shape of their

dendrites, dendritic spines, and synapses. As a result, the network of neurons they're linked to changes, creating new patterns of message transmission and--what's more important--new states of mind.

This process could also be called learning. When we learn, something new is born. Here's how the process works: At first everything pretty much makes sense. We have a certain way of looking at things, and it works for us. Then we begin to look at new information, and things begin to not make sense. We may become confused or frustrated. Finally, though, as the learning process completes itself, things make sense again, but in a new way that you never could have imagined before.

Here, though, is the key question: Why does one external stimulus cause the brain to alter itself so radically, causing a quantum shift in awareness or knowing, while another similar stimulus causes no shift at all? Why can we take in various ideas, with no shift, no learning, and then suddenly one particular additional idea often one that is relatively mundane, in many cases--creates a huge shift?

Another question: why does the exact same stimulus affect different people in entirely different ways? Michael Hutchison, in Mega Brain, gives this example: Three people drive by a red neon sign. The first person hardly notices it. It's just something red in the corner of her eye. She drives on, and the red light has little if any effect on her.

The second person is an astrophysicist who has been studying a problem having to do with the size and age of the universe. Suddenly, upon seeing the red light, he's reminded of a physical phenomenon called the red shift and it suddenly hits him that the universe is expanding in a certain way that can be measured by measuring shifts in light frequencies, and the full-blown solution to the

problem of the expanding universe hits him.

The third person sees the red light, and it reminds him of the red dress of his lover who has just left him, and he falls into a month-long depression.

Why do some stimuli have such a transforming effect? And why is the effect often so different on different people? Why do some stimuli lead to new and higher perspectives, while others lead to disorder and destruction? Why does the brain even need an external stimulus in order to make new connections, create new ideas, or experience Eureka moments?

An even bigger question: Is it perhaps possible to direct specific stimuli in such a way that we trigger new ideas or Eureka! Moments, whether mental or physical?

Chaos and personal transformation

Scientist Ilya Prigogine, a Russian-born Belgian theoretical chemist, found the answer to these questions, or at least laid the groundwork for the answers. In doing so, he won the 1977 Nobel Prize for Chemistry for work in the field of thermodynamics. So let's step back a little bit and take you through the process by which these answers came about, because these answers have profound implications for you as a human being, and especially as a human being interested in transformation.

Most people don't think about thermodynamics when searching for clues to personal transformation. But as we will see, there is an intimate connection

between thermodynamics and your life. In case you are about to panic because you think thermodynamics might be a daunting subject, let me promise to make this easy and very interesting, and to show you how this subject has a lot to do with you and your life and your happiness.

I'll admit that this doesn't start out sounding easy, but stick with me. Thermodynamics is the science of heat dynamics: the relationship between mechanical energy, or work, and heat. Scientists began to study thermodynamics in the early part of the industrial revolution, as they began to look at how and why the new thermal engines, such as the steam engine, worked.

One of the first things they noticed was an interesting relationship between heat and work: that each can be converted into the other. If your big brother ever gave you a Dutch Rub (what Bill Murray calls a "noogy"--you know what I mean), work (the Dutch Rub) can be transformed into heat, and it doesn't feel good. This turning work-to-heat relationship also exists for chemical, mechanical, thermal, and electrical energy all of them can be converted into each other.

However, whenever these various types of energy were converted into each other, scientists noticed something very interesting. They found that no engine ever yields as much energy as it consumes. Whenever work is done, whenever a conversion of one type of energy into another takes place, some energy is irretrievably lost from the system.

In a steam engine, for example, coal is burned, which boils water, and the steam, as it expands, turns a turbine. That turning turbine can be used to turn the wheels of a locomotive or to do many other kinds of work. Inevitably though, some of the energy in the coal is lost and isn't converted into work. Instead,

it becomes radiant heat, light, and friction. In this way, in every energy exchange, some energy is lost to the system.

There is another related effect: in every case, a machine or a system, in transforming energy into work, becomes increasingly disordered. In the steam engine, the friction between the moving parts causes the parts to wear down, and the connections and tolerances between the parts start to come loose. After a while, a tightly ordered steam engine begins to clank as the bolts come loose and the parts stretch and wear out. Unless energy is added in the form of an overhaul, new parts, and so forth, the machine will eventually fall apart into a chaotic bucket of bolts--kind of like a car I used to have when I was in my twenties.

It's all falling apart

In fact, all machines, all systems--unless energy in some way is added--must eventually wear down, whether it's your car, your cell phone, your computer, your toaster, the club you belong to, the company you work for, or your own body. Energy must be added, or chaos takes over.

Now stay with me. I know you're wondering what this has to do with you, but I'll make that clear in a moment.

This idea that all energy transfers involve a loss of energy, and that all machines and systems eventually break down unless energy is added is called the Second Law of Thermodynamics. This universal law could be stated this way: in any energy interchange, there is a decrease in the amount of energy available to perform useful work. This law applies to all energy exchanges in the universe.

Another way to say this would be to say that the universe is moving irrevocably toward increased decay and disorder.

Now that's a happy thought. There is, however, a silver lining in this cloud, as we will see.

The Second Law of Thermodynamics is also called the law of increasing entropy. So let's talk about entropy for a minute. Entropy is a measure of the amount of randomness, or chaos, in a system. The more order in a system, the less entropy. When the steam engine is new, all the parts fit tightly, and the engine runs well. At this point in its life it is the most efficient in converting the energy in the coal into work. But as the engine runs, the amount of entropy increases--the close tolerances in the parts decrease as they wear and the bolts stretch and move, and the engine's ability to convert coal into work decreases, creating even more friction, resulting in even less work, and so on, until the engine falls apart.

In other words, as all of this happens, the engine becomes more disordered. Here's why: The heat involved in the process causes increased molecular motion. This motion causes the moving molecules to collide more often, and they are knocked into increasingly random paths by these collisions. As the randomness of the molecular paths increases, they eventually reach a state of maximum randomness. This maximum randomness, this maximum amount of chaos, is called equilibrium or heat death. At this point, the tendency for the machine to become more disordered is offset by an opposite tendency for it to accidentally become more ordered, so it stays in this equilibrium state.

Here's another example. If you sprayed some perfume into the corner of a room,

the molecules of perfume would start out close together, but as they randomly collided (with each other and with other gas molecules in the room), they would gradually move apart, until eventually they would become evenly distributed throughout the room. At this point, an equilibrium state would be reached, where the tendency for the perfume molecules to become more disordered would be offset by an equal tendency to become more ordered.

So the Second Law is saying that the amount of entropy, the amount of chaos, in every moment, is always, irrevocably, increasing. Now I want to make it clear that the Second Law is not a theory. It has been proven to be true by scientists, beyond the shadow of a doubt--mathematically, and in every other way. There is no doubt that the Second Law is the law in this universe.

The Big Question

So, I've come the long way around to get to what you might call The Big Question, which is: How, in a universe irrevocably moving toward increased disorder, did life develop? How did some things become more ordered? Everyone can see that there is an opposite tendency in the universe, in which some things become more ordered. How, in a universe where chaos, entropy, is always increasing which it is--can some things become more ordered?

Look, for instance, at the development of life. After the Big Bang, there were atoms. Atoms, though, somehow became molecules, which somehow became amino acids, which became proteins, which became cells and single-celled organisms, which became more complex organisms, which became even more complex organisms, including higher plants and animals, and eventually human beings. Human beings then created social systems and thought of ways to create even more complex ways

of ordering things, such as art and creativity and cities--and even personal and spiritual growth, and expanded awareness.

So, to ask the question again, how could this be happening in a universe which in every moment is becoming increasingly disordered? Scientists, for well over a hundred years after formulating the laws of thermodynamics, swept this question under the rug. They just didn't deal with it, partly because they didn't have the mathematics to deal with the infinite number of variables involved in such complex systems. But in the second half of the twentieth century Ilya Prigogine and a few other scientists, using probability theory and the new field of chaos theory, finally answered this intriguing question.

I'll bet you're dying to know the answer.

This answer, I think you'll agree, turned out to be a real stunner! Prigogine's "Ah ha!" was that order arises because of chaos, not despite it. Life, and all order, emerges out of entropy, not against it.

Let's look at this more closely, so you can understand what I mean. First, Prigogine realized that the Second Law applied only to closed systems. What are closed systems? Closed systems are self-contained systems, essentially already at equilibrium. They cannot exchange energy or matter with their environment. Examples of closed systems would include a brick, a pile of sand, a piece of plastic, or a picnic bench. These things really don't exchange energy and matter with their environment. (In reality, there are no truly closed systems, but the interaction these things have with their environment makes them, for all intents and purposes, closed systems. You'll see what I mean as we begin to look at open systems.)

You are a whirlpool

Living systems, on the other hand, are open systems. Open systems freely exchange energy and matter with their environment. For instance, human beings take in heat, light, food, air, information, and other things, and give off carbon dioxide, waste, heat, and even things such as art, creativity, and so on.

The second characteristic of open systems is that they are far from equilibrium. This means they are constantly in motion, adapting, changing, and adjusting to unpredictable outside stimuli. They grow and change in unexpected ways. They reproduce, they fix themselves, they learn new ways to operate if a part of the system is lost or altered.

Open systems are a flow of energy and matter, kind of like a whirlpool. A whirlpool has water constantly coming in the top, and water exiting from the bottom. In fact, the whirlpool is the water coming in and going out. In the same way, you are like a whirlpool, though your whirlpool is moving more slowly. Still, you have some sort of input coming in, and some sort of output going out, all the time, and you are this flow. It's not that you are a container with something flowing through it--you are the flow itself. Or, you could say that the container and the flow are the same thing.

A key characteristic of open systems is that they are adaptable. Think about it: every day you handle all kinds of fluctuations in your environment. You see different sights, different people, different things happen, the weather changes, you eat different food, find out about different news, and so on. Most

of the time you easily flow with what is happening, and deal with it pretty well. And, once in a while, something happens that is just too much for the system that makes up who you are, and at those times, you experience increased chaos, sometimes, if conditions are right, that chaos is followed by significant change. We'll see why in just a moment.

The scientific community, for many years, saw the instability of open systems as a negative. They wanted simple, easy laws, such as those formulated by Isaac Newton. You throw the ball, at this trajectory, with this amount of force, and you can predict where it will land, when it will land, with how much force it will hit the ground, and at what angle it will rebound. Complex, open systems, though, are not so easy to deal with. There are often an infinite number of variables, and an infinite number of possible adaptations and responses. For this reason, scientists didn't seriously look at complex systems for many years.

Order out of chaos

Prigogine, however, saw open systems as creative, vibrant, unstable--but fertile. Though they were often wild and unpredictable, he saw them as, ultimately, the source of order, organization, evolution, and life itself. What's more, Prigogine saw the study of such systems as potentially providing the answer to the age-old question of how order emerges from chaos, how life evolves from lifeless matter, against the grain of increasing entropy.

Prigogine's breakthrough came from studying a specific far-from-equilibrium chemical process called the Belousov-Zhabotinsky reaction. In this reaction, four chemicals are placed in a shallow dish at a specific temperature. These four chemicals amazingly self-organize into a structure of concentric, spiraling

waves, spreading and pulsing with clock-like regularity and changing colors at precise intervals. This reaction appeared to contradict the Second Law in that it decreased entropy and increased order. The reaction, while converting one form of energy and matter into another, actually became more ordered instead of less ordered, seemingly going against what the Second Law of Thermodynamics predicts.

I know that the breaking of this law has you law-and-order fans quite concerned, but you'll be relieved to know that ultimately the second law was obeyed--though in a very surprising way. Prigogine discovered that this reaction became more ordered because it actually exported entropy to the surrounding environment! This was the breakthrough Prigogine was looking for. He realized that order emerges not against, but because of entropy, that a system can become more ordered by increasing its ability to export entropy to its environment. In fact, he concluded that ordered structures are the inevitable result of far-from-equilibrium, chaotic situations.

Prigogine called these structures dissipative structures, because of their ability to dissipate entropy to the surrounding environment. Why should any of this interest you? It should interest you because you are a dissipative structure. In fact, all open systems, including living systems, since they are a flow of matter and energy--what you might call matter and energy whirlpools--must maintain that flow. How? By constantly taking in matter and energy and constantly exporting the resulting entropy to the environment.

Take a brick, which cannot export entropy to its environment. What happens as a brick takes in energy and matter? It is either worn down, or it shatters. An open system, though--a dissipative structure--is able to maintain its structure

because it has the ability to dissipate entropy to its environment. A brick, though, has no way to dissipate the entropy, so it wears down or breaks apart.

If a system can't get rid of entropy, it builds up. If enough of it builds up, the system eventually falls apart. You may have heard about the Tacoma Narrows Bridge in Tacoma, Washington. Quite a few years ago, in a high wind, this bridge began to dissipate the entropy caused by the high winds in the only way available: by swinging wildly. At a certain point, though, the bridge could not dissipate the entropy created by the wind, and it was destroyed.

Dissipative structures, then, are open systems in far-from-equilibrium environments, continuously taking in energy and matter from the environment, and continually exporting entropy to the environment. According to the Second Law, this energy exchange must produce entropy, just as it did in the steam engine, causing molecular chaos. In a closed system like a steam engine, this entropy causes the system to run down, wear out, or fall apart. Dissipative structures, though, are self-organizing. They maintain their structure, and even increase it (as in the Belousov-Zhabotinsky reaction), by exporting entropy to the environment.

Let's look at some additional features of dissipative structures. First, the more complex the structure, the more entropy it must dissipate to maintain its structure. This means that complex systems are more susceptible to the effects of entropy than are simple ones. The more complex the system, the more fragile it is, but also the more dynamic.

Are you a Honda or a Ferrari?

Consider the difference between a Honda Civic and a Ferrari. The Honda is a much simpler system, whereas the Ferrari is very complex. Which spends more time in the shop? The Ferrari. But, the Ferrari is also much more dynamic, and can handle more situations. It can corner better, accelerate better, handle bumps better, and so on. The Ferrari thrives in far-from equilibrium, high-energy, unstable driving environments, and this is the same with complex, open systems in general: they thrive in far-from-equilibrium, high-energy, unstable environments.

Now stay with me, because here's where it gets interesting, and here's where it's going to become more clear to you how all of this applies to your life.

We've established that you are an open system, a flow of energy, and that to continue to exist as a complex open system, you need a certain amount of continuous input. And, you have to continually get rid of a corresponding amount of entropy. If you don't, it will build up inside, and we all know how that feels. (In fact, living things die when one of two things fail to happen: they can no longer take in enough raw material, or export enough entropy, to keep the system together--just as a whirlpool collapses when it can't take in water at the top or export it from the bottom.)

I've previously introduced the idea that we each have a threshold for what we can handle. Interestingly enough, it turns out that every open system has a threshold, and this threshold is the point at which the input to the system exceeds the system's ability to dissipate the resulting entropy.

Up to the point at which your threshold is reached, you're able to deal with all kinds of fluctuations from the environment. This happens, that happens,

something goes wrong, you miss your bus, the power goes out, you can't find your keys, the boss yells at you, whatever. You deal with it, because the system that makes up who you are is able to deal with the input and dissipate the necessary entropy. Up to your threshold, to do so is easy.

But once that threshold is reached, the amount of entropy you can get rid of isn't enough compared to the amount of input the system is experiencing. As a result, entropy begins to build up in the system, which means the system becomes more chaotic, less ordered. For a while, you handle it. Maybe it builds up for a while, and then, thankfully, the input slows a little, and you have time to get rid of the buildup. But sometimes, it keeps building up, and if this continues, at some point the chaos becomes so intense that the system begins to become seriously unstable.

Finally, things come to a climax. The system reaches a critical stage, where one additional small fluctuation can cause the system to fly apart, the proverbial "straw that broke the camel's back," as the scene in Monte Python's The Meaning of Life, where Mr. Creosote is offered "just one thin mint" after eating everything in the restaurant, and then he explodes. (Well, maybe that's not the most tasteful example. Never mind.)

This point, at which the chaos becomes so great that the system can no longer sustain itself as a viable system, is called a bifurcation point. A bifurcation point is a moment of truth, a fork in the road, a point of no return the point where everything changes.

Would you like to know what happens at a bifurcation point?

The probability that you will change

Actually, no one knows what will happen. Why? Because there are, quite literally, an infinite number of possibilities for what can happen. The system may just fall apart and die. It may come to a crashing halt and cease to exist as a viable system. However, there are an infinite number of other possible outcomes, too (which, I think you'll agree, is a lot). The probability of this infinite number of outcomes can be arranged in a bell curve, with the most probable in the center and the less probably out toward the edges. One of those infinite numbers of outcomes is the death of the system. But the other outcomes--as I said, an infinite number of them all involve the system reorganizing itself in a new way, at a higher, more complex level.

What can we say about this new structure? It is, first of all, more complex than the old system, and second, it can handle the fluctuations, the input (and the resulting entropy), that the old system could not handle. And the reason the new system can handle what the old system could not is because the new system has the ability to dissipate an increased amount of entropy to its environment. In other words, it can get rid of chaos at a greater rate than the old system.

This process is relevant to all open systems in the universe: a seed germinating, a highway system, a society, a living thing, an ecosystem, a galaxy--and you.

Think of a seed. The seed can remain a seed, and deal with changes in moisture and temperature, up to a point. But with a certain amount of moisture, and at a certain temperature, the seed cannot dissipate enough entropy to remain a seed, and it goes into chaos, temporarily, and then bursts into a seedling.

Or take a cell in your body. It takes in nutrients, heat, and various other kinds of input. At the same time it gives off waste products and in other ways dissipates entropy to its environment. But at a certain point it cannot dissipate enough entropy to continue to exist as a single cell. It must either die or reorganize at a higher level, and if it does reorganize at a higher level, it does so by undergoing mitosis, cell division. You probably remember from high school biology that cell division involves the nuclear material going into chaos temporarily, after which the cell divides in two.

The same thing goes on in the evolution of scientific thought. The prevailing theories of science maintain their structure, even though various new pieces of information are discovered. But at a certain point, enough new information comes to light that the old theories cannot continue to exist. The theoretical infrastructure goes into chaos temporarily, and then, suddenly, reorganizes at a new and higher level, one that takes into account the information the old theories could not.

When Galileo and Copernicus began to say that the earth revolved around the sun instead of the other way around, the old way of looking at things withstood this new input for quite a long time. As more and more evidence came to light, a point came where thinking on that subject became more and more chaotic, until scientific thinking reorganized at a higher level in which the new information could be taken into account in a new point of view, a new paradigm. This has happened countless times, in science, in medicine, in technology, in every area of life.

When you came to Centerpointe, you had a certain way of seeing yourself and your life. Hopefully, we've given you a lot of new input, some from Holosync and some from information we've given you. It's very possible that this input has thrown things into chaos for you. At some point, if it hasn't happened already, your view of who you are will reorganize at a higher, more complex, more functional level. In fact, this will happen over and over, until you have one hell of an amazing system that can handle pretty much anything without skipping a beat.

Let's take another example: a highway system. When you include the highway engineers, a highway system is a primitive open system. Cars come into the system, and then, by using the off-ramps and exits, are able to leave the system. If more vehicles come into the system than the system can dissipate, though, what happens? Chaos. A traffic jam. But if the highway engineers come along and build more lanes and more on-ramps and off-ramps, the highway system reorganizes at a higher level, one that's more complex, can dissipate more entropy, and can handle more input.

More examples: A revolution creates a new government that handles the problems the old government could not solve. The human body creates new antibodies that are able to overcome a disease. Your brain creates new learnings that allow you to deal with a situation that previously overwhelmed you. Out of chaos emerges a transformed system: the dissipative structure "escapes into a higher order."

Take the quantum leap!

This process unpredictable, self-organizing, evolutionary is what scientists call salutatory: which means characterized by a series of leaps and bounds, or quantum leaps. The interesting thing about quantum leaps--about open systems

reorganizing at higher levels--is that each new system is truly new, and the process involves a true death and re-birth. The process is nonlinear with what went before (any linear change is disrupted by the tumultuous chaos and reorganization period), and therefore is only predictable with probability theory.

This description of change has been applied to virtually every field of human inquiry, including how cells transform food into energy, the moment when an audience breaks into applause, the growth of plants, the organization of societal structures in nature, such as schools of fish, bee swarms, termite colonies, and human cultures. It explains such diverse things as how stock market patterns evolve, the psychology of altered states of consciousness, the interaction of nerve cells, the origin and development of cancer cells, behavioral change, and artistic expression. This is how all change in the universe happens, and I don't know about you, but for me there is something very awe-inspiring about that.

Here's why I became interested in dissipative structures. As I used Holosync and watched what happened, both in myself and in other people, it was clear to me that Holosync creates fluctuations in the brain that it cannot handle, at least not with the way it's currently structured. As you use Holosync, from time to time you can feel yourself, in one way or another, going into a more chaotic state. Sometimes that state is one of increased emotional upheaval, and sometimes it's what you might call an altered state of awareness.

Then, at a certain point, the brain reorganizes at a higher level of functioning, and everything is different. As this happens, your threshold for what you can handle, mentally, emotionally, physically, and even spiritually,

goes up. As a result, you can handle more input without feeling chaotic inside, because your ability to dissipate the resulting entropy to the environment is greater.

Ilya Prigogine and his whole theory of dissipative structures was a revelation to me, because it described exactly what happened when we used Holosync. Here's one way to describe this process. At first, things make sense. Then, things begin to be more chaotic, and they don't make sense anymore. Finally, the system undergoes a quantum leap, a reorganization at a higher level, and then they make sense again, but in a whole new way that you never would have imagined before.

Chaos, then, leads to positive change, and as a result, we all welcome it, right?

Wrong.

The real reason why we resist change

As I'm sure you know, we tend to resist chaos. In fact, we tend to freak out when the chaos gets to be too great. This is an interesting phenomenon, worth looking at more closely. So let's look at chaos, and how people tend to respond to it.

There are really three ways people resist chaos, and now that you understand Prigogine's theory of change, this will make a lot more sense to you. Imagine that you are in a boat out on the ocean, and the boat starts to fill up with water. If you don't do something, the boat is going to sink, and it's a long way to dry land.

What would you do?

Some people would grab a bucket and bail like crazy. The bailers are those who, when the input exceeds the system's ability to dissipate the resulting entropy, frantically try to push energy out of the system. They get angry. They cry. They yell. They might exercise compulsively. They might have sex. They feel compelled to do something, anything. The whole idea is to push energy out as fast as possible, so as to empty the system faster than it can fill up.

Some people, though, say, "No, no, no. I'd find the hole and plug it." These are the people who want to shut off the input, to keep more from entering the system. These people isolate themselves in order to minimize input. They shut down. They might get depressed. In depression, in addition to wanting to isolate ourselves, we also breathe less, so as to take in less air, we constrict the pupils of our eyes, so as to take in less light, and we lose our appetite, so as to take in less food. In depression, everything is about keeping more input from entering the system.

The third method is to distract yourself--by getting high, by zoning out in front of the TV, by becoming absorbed in something that takes your mind off the fact that you're overwhelmed by too much input, that you're over your threshold.

So what happens if, using method number one, you do successfully push enough energy out of the system? Eventually, the pressure on the system is reduced, especially if the input slows down, which, in most cases, it eventually does. Once this happens--once you bail enough out of the system--the overwhelm decreases, and you feel better. Sound familiar? You've probably done this.

What about method number two? What if you successfully prevent more input from coming in, or at least drastically reduce the input to the system? Again, eventually, the system rights itself. The ability of the system to export entropy to the environment catches up, and the pressure on the system dissipates.

The third method, distracting yourself, really doesn't work at all, though, unless you use it in conjunction with one of the other two, which is what most people do. Method number three is like Nero fiddling while Rome burns. In my experience, most people use method one or method two as their primary method, with the other as a backup. They get angry, for instance (method one) and if pushed further, they eventually get depressed. Or, they get depressed first, and if that doesn't work, if the overwhelm continues, they eventually get angry. Of course, very often, people use method number three along with one of the other two in order to distract themselves from the chaos they are experiencing.

Winning the battle but losing the war

Here's the problem with all of these methods. If you use method one or two, when all is said and done, once the system returns to equilibrium, it's still the same system, with the same threshold for what it can handle. This means that the next time the system is stimulated in the same way, it gets overwhelmed again in the same way.

Many people keep going through this same cycle over and over for their entire life! They become overwhelmed, because the system that makes up who they are has a certain threshold and it cannot handle the amount of input coming from their

environment. They use either method one or two (or both) to relieve the pressure. They feel better, at least temporarily, until the next time the input gets to be too much. Then they become overwhelmed again, in the same way, and the process keeps repeating, over and over.

If, however, the system is allowed to go through the entire process, where it eventually comes to a bifurcation point and reorganizes at a higher level, the problem is solved. The new system has a greater ability to dissipate entropy to its environment, which means its threshold is higher. The new system can handle what the old system could not handle.

So, by fighting to save the system, we're fighting to preserve the very limitations that caused the problem in the first place. Don't you find this to be ironic? I certainly do. It's amazing that we do this. We fight to hang on to the very thing that causes us to be overwhelmed, so we can be overwhelmed again in the same way, over and over.

We're smart, conscious people, right? Why, then, do we do this? Why would we fight to hang onto something that perpetuates our problems? Well, I'll tell you whyand this goes back to what I think is the fundamental cause of suffering in human beings. When the system begins to go into chaos, we think we are going into chaos. We think we are falling apart. We identify with the system, and we think that if the system falls apart, we're falling apart. But that's not true. What's really happening is that our Map of Reality--which, remember, is just a concept, our idea of who we are and what the world is--is falling apart.

Not only that, it's a good thing that it's falling apart. Isn't it? Consider for a moment that you have a way of seeing things, a way of doing things, a way of

perceiving reality, a system for figuring out who you are and where you fit into everything, and it's inadequate in handling the environment in which you find yourself. That particular way of being in the world, of seeing yourself and other people, keeps becoming overwhelmed by what's going on around it. When you process your life through this system, this Map of Reality, you quite often end up feeling bad, and you keep creating outcomes you don't want.

"Hallelujah!"

Yet when this system starts to break down--eventually resulting in a new and better system--we fight to save it.. We should be shouting "Hallelujah!" and celebrating the fact that we're going to have a new system, with a higher threshold, a system that will be able to handle a lot of what the old system couldn't handle.

Can you see that if you mistake this system, this Map of Reality, for reality--if you mistake this idea of who you are for the real you--you'll very naturally think that you need to save it, to protect it. But if you realize that the map is not the territory, that your idea of you isn't you, that it's just a representation of reality, then...you can just let it go.

So how do you get yourself to stop protecting this old system? First, you have to really get clear that the old system, that old Map of Reality, isn't who you are, which I hope I'm helping you to do. This whole series of articles has been about getting you to see that who you've always thought you are is just a mental construct, that your mind is busy distorting things, chopping the universe, arbitrarily, into separate bits and separate events--including the separate bit you think of as "you"--and that though we take all of this for reality, it's

not. It's a conceptualization of reality, and if that conceptualization can't handle the environment it's trying to conceptualize and, as a result, falls apart and is replaced by a better, more complete, more resilient conceptualization, that's a good thing, and we should welcome it.

The second thing you can do is to step back and watch the whole show, and realize that it's just a show. So, we're back to the witness, to paying attention rather than being unconsciously immersed in what is happening. If you are immersed in your map of reality--your idea of who you are and your relationship to the rest of the universe--when it goes into chaos, you'll feel like you have to save it because it will feel like you are going into chaos.

But if you step back and watch, you'll realize that it's just a map, just a concept, and that there's nothing to save (and, actually, no one to save it), and that life will be better if you just let it fall apart and reorganize in a new way.

I hope you can see the relationship of chaos and reorganization to the principles of Letting Whatever Happens Be Okay and Threshold. Your threshold is the point at which you start trying to protect the old system from falling apart which certainly isn't letting whatever happens be okay.

All you need to do is watch.

So when you feel the chaos, let it be. Watch with curiosity. This process of change--of overwhelm, breakdown, and reorganization at a higher level--is the most natural thing in the universe. In fact, it's the key mechanism behind all change, all evolution, in the universe. As I hinted earlier, this Prigoginian process of dissipative structures

reorganizing at a higher level is God in action. It's the heartbeat of life, it's the dance of the universe, it's the way God unfolds the whole show. So the ultimate "Let Whatever Happens Be Okay" is to get out of the way of this natural process that can be found behind everything--or at least everything in the world of the mind.

One of the fundamental principles here is that everything constantly changes. This is what's behind Buddha's explanation of human suffering and how to end it, his Four Noble Truths. People suffer because in the world of the mind everything changes, everything comes into being and passes away, and we resist that fact. The process I've described here is how this process of constant change happens. Either things reorganize at a higher level, or they die and pass away. Even when something reorganizes at a higher level, in that process the old passes away, and the new comes into being. Resisting the fact that this is what happens, over and over, is what causes your suffering.

The only way to avoid the suffering that accompanies constant change is to realize that you are both an individual person and, at the same time, the mysterious and unchanging nothingness that lies behind all the change.

You are the background, the witness, the silent, unchanging nothingness out of which the world of change comes, and the change you see is all a creation of the mind. We each live in a private world created by our mind, a world governed by the change process I've described. If you fight that process, you suffer. If you let it happen, if you step back and watch, you avoid most of the suffering.

So here are some practical things you can do. First of all, recognize when your Map of Reality is beginning to become chaotic. This is really the same as noticing when you are approaching and reaching your threshold. Get to the point where when the

chaos begins to build, you then say to yourself, "Ah, I'm moving toward my threshold, I can feel the internal chaos." Noticing is the first step. Amazingly, most people do not notice when they are approaching their threshold, but you can learn to notice this, if you just decide you're going to.

This is what conscious awareness is all about. It isn't something metaphysical. It's something very matter-of-fact. This is one reason Buddhists say, "Before enlightenment, chop wood and carry water, after enlightenment, chop wood and carry water."

The next step is to become aware of what you typically do when you're pushed over your threshold. Do you try to push energy out? Do you block more from coming in? Do you distract yourself? Or do you do a combination of these?

Find out. Watch what you do. Instead of just automatically doing whatever you've been doing all your life, pay attention. If you're going to use one of these three methods of dealing with overwhelm, at least do it with awareness.

Pretty much anything active that you do as a response to feeling the building chaos qualifies as pushing energy out of the system, from pitching a fit all the way to drumming your fingers. It doesn't matter whether it's something considered to be healthy or unhealthy, either.

And, any way that you try to block more input from coming in, whether it's depression and isolation, wanting to shut out light or sounds, or not wanting any more information about something, as long as it is a reaction to feeling overwhelmed, it qualifies.

One more thing. You aren't doing something wrong just because you engage in some sort of activity when you become overwhelmed, or that you're doing something wrong when you want less input, or that you're wrong for distracting yourself. This isn't about being wrong. Allow yourself to be human. I just want you to be aware of what you do. Just watch yourself do whatever you do. Live with awareness instead of automatically doing the same thing over and over, unconsciously and automatically.

Finally, when you feel the overwhelm building, when you feel the chaos happening, step back and say to yourself, "Ah ha. The old system can't handle what's happening, and if I just leave it alone and watch, if I step back and don't try to save the old system, it will probably reorganize in a new way, and many of the problems of the old system will be solved." Then, just watch the process with awe and curiosity, knowing that you're watching God in action.