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Altered States of Consciousness and Psi Phenomena

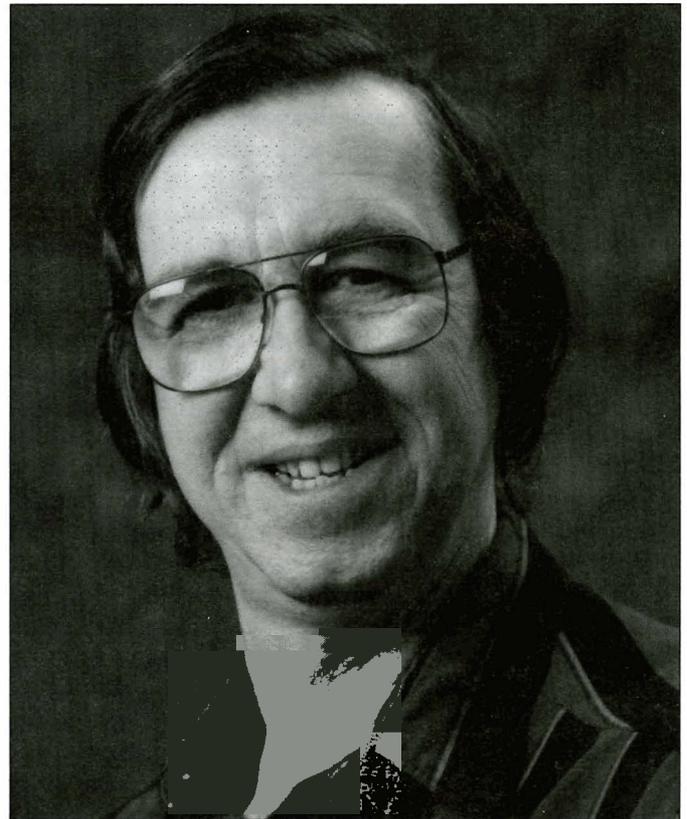
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The following article is based on a lecture presented by Dr. Charles T. Tart at the ASPR Conference - "Dynamics of Healing: Altered States, Ritual and Medicine" held in San Francisco, California.

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Here's a look at the outlines of the forest before we plunge into the trees. I'm going to talk about non-ordinary states, virtual reality, hypnosis, meditation, and lucid dreaming. This will be based on a look at the human situation—namely how we construct our experienced world. I'm going to talk about this as living in a world simulator. Then we will focus on some special dynamics in the context of the world simulator. I'll talk briefly about altered states of consciousness as a way of getting away from some of the dispiriting effects of the materialistic philosophy I call Scientism. Then we will discuss parapsychology as a first class scientific foundation for being able to take a broader view of reality and yet continue to be an intelligent, scientifically inclined person. I'll end up by warning you to be discriminating about some of the stuff that is labeled "spiritual" or "psychic," because a lot of it is nonsense.

What is the human condition of living in the world simulator? We assume reality is really out there, and that we simply perceive it as it is. For example, we assume our



eyeballs are like a couple of TV cameras which project little pictures inside our heads that show exactly what's out there. Psychologists have known for a long time that this is a very naive view: things are far more complicated than that. So we need a more useful model.

One model of how we perceive the world and ourselves comes from neurology, specifically from the study of perception and the brain. This model says that what we directly perceive is a pattern of electrical and chemical impulses in our brain. We don't see light directly. Light comes in and affects certain receptors in our eyes, which then translate the light into electrical impulses. These impulses run through several relay stations in the brain and finally result in some particular pattern of electrical and chemical impulses. If you're a materialistic monist by philosophical

inclination, that's all there is to it. If you're a dualist and think there is a soul, then the soul is connected with the brain and perceives that pattern of electrochemical impulses.

The important point is that perception is a *construction*. It's not just passing on information. There are all sorts of semi-arbitrary changes in the information we receive before we actually see the world. In visual perception, for example, lines are sharpened up more than they actually are in the world around us; foreground is enhanced versus background; faces are given more intensity and are magnified in size.

In addition to these inborn neurological factors, psychological factors further determine how we see. If you see someone who has an "ugly," "hateful" face, your individual psychological processes have strongly affected your perception. You don't see someone's face and then think: "Given my past experience with this person, I have decided to think he or she is hateful." You directly *see* them as hateful. Your perception is strongly controlled by your feelings and beliefs. Our consciousness, our experience "lives in" a model or a *simulation* of reality. Because I say simulation, don't take that to mean that the simulation is unreal. The simulation *is* the reality we are directly in touch with! So I say simulation to remind us that we don't simply perceive things as they are, but it's definitely and immediately real.

This kind of simulation—this *world simulation process* as I like to call it—has a very important function. We could not figure out everything we need to do in reality moment by moment. We need summarized, stored knowledge, and our experience with the world creates this internal model. These models or maps of reality make us far more intelligent. For example, if it were night and a power failure killed the lights, I could find my way to the doors of this room because I've already stored a simulation of this room.

Right now, you're looking at a simulation of me. You're not simply seeing much of the reality of me as I am. Various neurological and psychological processes affect what you perceive. If you want to think of the soul, or whatever consciousness ultimately is, it's sort of glued to, looking at the screens inside our minds where this construction of reality is displayed—visual screens, touch screens, sound screens.

When you really get into the details, it's more complicated. There are at least six different visual screens that pick out different aspects of vision.

The psychological condition we call dreaming is a world simulation process. When you're having a dream, that's reality. The things you see or hear are things in that dream world. The world simulation process is creating dream space and time, it's creating "you," and creating a dream world around you in which a drama takes place. The world simulation process operating in you right now has a vital constraint on it, though. That simulator has to adapt itself to the things you are seeing, hearing, tasting, smelling or feeling. If it doesn't, you walk around in a different world, and you can get run down by a truck! In dreams there are no constraints of having an outside physical world to adapt to, so

the world simulation process runs essentially much more freely. We can have a more interesting life in our dreams.

Another important aspect of the human condition is what's been called "living in illusion." The Hindus called it "maya"; the Buddhists called it "samsara." Many spiritual traditions say we live in illusion. What is important about this concept is that our simulation of the world—this map that we live in—is inaccurate in a number of ways. We live in illusions which, unfortunately, we don't recognize as illusions. We simply assume we're in direct perception of reality. Much of the time our world simulation is good enough. However, most of the important things we deal with in life are not simple things like: is the truck coming down the street or not? It's: "What does she mean?" "What are his intentions?" And so forth. We live in a much more subtle world where our simulation, if it gets distorted, can get us into a lot of trouble. For example, some people see many other people as "sinners." If these people come in contact with "sinners," they must determine whether to treat them condescendingly or haughtily, whether or not to try to reform them. The "sinners" perceive that condescension and haughtiness at some level and they respond nastily. This response reinforces the conviction that they were "sinners" in the first place. This is living an illusion. Ideas and beliefs can actually distort perception in a way that produces a pseudo-validation of the original beliefs. Obviously, this is not healthy. Any kind of healing, in the general sense, has to begin correcting the kinds of illusion we live in.

What can we do about living in illusion? There are three major ways of dealing with this. The first way is to get in better touch with reality—to have your simulation more accurately reflect the actual physical world, the actual other people in it and your actual self. You educate yourself, find out what authorities have discovered about the way things really are. It can be highly useful to draw on the stored knowledge that other people have researched. On the other hand, learning from authorities can also be a very sick process. Some of these authorities are wrong and don't know it. Also, "education" can easily contain elements of brainwashing or indoctrination. We certainly need to learn from other people, but it's not totally sufficient.

The second major way to get in better touch with reality, to "tune up" your world simulator, is a category of techniques I would call "attention-training processes." One example, for instance, is concentrative meditation techniques. We usually walk around with the illusion that we already know how to concentrate, but we really don't. Just try to focus on the sensation of your breathing for the next half hour without having your mind wander if you need a demonstration of this point. There are also meditation techniques that allow you to observe the nature of your thoughts—to actually get inside some of the ways your world is being constructed moment by moment.

The third way is pursuing the particular contents and dynamics of your own mind, your personal world simulation. We usually associate this with Western psychotherapy or the kinds of growth techniques which have been developed in the

past couple of decades. You begin to see what makes you tick. You begin to see the emotional forces that are often so important in distorting your perception.

Most of our simulation of the world was learned in childhood. We were taught how to perceive, including a lot of invalidation of our emotions as children. We were shaped, seduced, and pressured, brainwashed until we became "normal."

We have something I call consensus consciousness. We see the world pretty much the way people around us see it. People who don't see it our way we call crazy and lock them up so they don't bother us. This shaping is a continuing process. There is constant reinforcement for being "normal," reminding us of what the rules are for how we should perceive reality. You meet a friend and say, "Hi, how are you?" On one level, that's just what it seems. You're greeting a friend. On another level, you're reminding people of the proper way to greet each other. If you don't believe me, the next time you see a friend, instead of saying "Hi," stand on your head.

We're incredibly sensitive to infractions of these rules. We're constantly being reminded of what the rules are and how to fit in. A lot of these reminders are implicit. Sometimes they are explicit. Sometimes people recite the rules for their belief system. For example, lot of Christians go to church on Sundays and recite some version of the Apostles' Creed. A powerful belief system is detailed and reinforced there. People get up and say this in unison. It's an explicit reinforcement that helps stabilize your belief system which, in turn, helps your world simulation process keep constructing the world in accordance with your particular beliefs.

Our contemporary Western culture also has an implicit creed with specific beliefs about who we are, why we are here, what the world is like, and how we're supposed to live. We seldom get up and express these beliefs together. This lack of explicitness doesn't give quite as strong a reinforcement as if you get up and say I believe in so and so. On the other hand, when your beliefs become implicit, they strongly control you. There's not much you can do about it because you don't know there's a problem.

One part of the set of beliefs that constitute our world simulation in the Western world is something I call Scientism. Notice I'm not saying science. Science is a process which is perfectly compatible with genuine spiritual seeking. Properly done, science is an open-ended growth system which can help a person grow. Scientism is a philosophy, a set of beliefs that what's material, what can be measured or detected, is all that is real. When this philosophy becomes a dogma, when it becomes implicitly believed and controls people's perception and thought processes, it becomes Scientism. It draws on the prestige of science, which has succeeded so well in controlling the physical world. Scientism, which is a *philosophy* of materialism, acts as if it's simply scientific truth. It does control the way you perceive the world. We have this old saying that "Seeing is believing," but, we should supplement that with "Believing is seeing."

We can literally construct the way we see the world. Scientism is believed in implicitly and practiced to varying degrees by almost all educated people in the Western world. We can't exist in this culture without being constantly affected by Scientism.

To give you some feeling for what I'm talking about, we're going to do a belief experiment. For this experiment I've taken supposedly scientific facts about the universe that science has discovered. I've taken these so called scientific facts about the universe (really just theories, now treated as facts) and put them in a form like the Apostles' Creed, so that we can say it together and get a little feeling for what that's like. Say this with me:

"I believe in the material universe as the only and ultimate reality. A universe controlled by fixed physical laws and blind chance.

I affirm that the universe has no creator, no objective purpose and no objective meaning or destiny.

I maintain that all ideas about God or Gods, or higher beings, are superstitions and delusions. Life and consciousness are totally identical to physical processes and arose from chance interactions of blind physical forces. *My* life and *my* consciousness have no objective purpose, meaning or destiny.

I believe that all judgments, values and moralities are subjective, arising solely from biological drives and chance. Free will is an illusion. Therefore, the most rational values I can live by must be based on the knowledge that, for *me*, what pleases me is good; what pains me is bad. Rationality requires that friends and enemies be used in ways that maximize my pleasure.

I affirm that religions have no real use other than social support; that there are no objective sins to commit or be forgiven for: that there is no supernatural retribution for sin or reward for virtue. Virtue for me is getting what I want.

I maintain that the death of the body is the death of the mind. There is no after-life, and all hope of such is nonsense."

Reflect a little. Is this a healthy attitude toward life? Does it promote health and happiness? Most people find this creed depressing because they notice that they believe a lot of this stuff without having known they believed it. This is almost inevitable if you're a Westerner. This is the creed of Scientism. If you're interested in this kind of exercise, a much fuller description of it is in my book, *Open Mind, Discriminating Mind*. Would we like to change from this sort of dispirited view? I think a lot of us would. One major path to changing is what we might call the way of altered states of consciousness. An altered state of consciousness is a change in the way your world simulation process creates reality.

You perceive, feel and think in new ways and, of course, you then act in new ways. Altered states include dreams and states induced by various kinds of drugs. Meditation and strong emotions can also induce altered states of consciousness. You gain freedom by seeing the world in a different way.

If all you ever experience is one other altered state,

there's some danger that you then say, "Well, now I've seen the Truth." You go from being stuck in one perspective on reality to being stuck in a second perspective on reality. On the other hand, having had the advantage of two perspectives can make you take *any* perspective a little less seriously and realize we have various ways of approaching the world.

Altered states can have tremendous effects. I can almost guarantee for example, that a near-death experience will fundamentally change your perspective on life. However, I don't recommend it as a method because the "near" part is kind of tricky! You go a little bit too far and we don't get any report on how it changed your perspective. There are much safer ways. In a lot of altered states people get perspectives that are the opposite of many things in the Western creed. They may perceive a spiritual reality in addition to physical reality. They may feel a contact with God or the Creator, or feel there's an objective purpose to the universe. They may see consciousness as a distinct reality of its own --not just some sort of artifact to the brain. They may see there is really an objective morality, that there really are laws that govern the consequences of how we act. Generally, they become less "religious," but more "spiritual." They tend to see particular religions as just one formulation, not the ultimate truth. If you're interested in the altered-states route, I recommend meditation, taught by a good teacher, as an excellent way to learn to begin to concentrate more. Once you get into insight-type meditation, you begin to see the way your mind is creating worlds from moment to moment, based on your beliefs and needs. Once you begin to see those things, you have the possibility of doing something about it, if you don't like the particular thing that's being created.

I need to raise an important objection to the way of altered states of consciousness, though. How do we know that what people see and experience in altered states isn't just another illusion? After all, we experience illusions in our ordinary state, and if you look at the contents of altered states, you can see there are a lot of illusions in altered states as well—illusions that come on with ten times the force of ordinary illusions. Just because you're in an altered state of consciousness doesn't mean you're seeing truth. You're seeing something different. LSD, for instance, lets people get glimpses of the truth because it acts like a sledge hammer to temporarily break down the machinery of ordinary consciousness and belief systems. But in other ways, it takes illusions and makes them ten times as glowing and wonderful and obviously true as they are normally.

We really need to try to understand what reality is, and here's where we get into psi phenomena. I'm using the word "psi" now in the modern sense, as a general term for the capacities of the mind to reach out beyond the sensory limits of the body. Psi can be used to gather information about the world or to make changes in the world, or both. The fundamental realities of psi phenomena, things which are now well proven with the best kind of scientific evidence, undermine Scientism's claim to be all comprehensive. Materialist ideas work extremely well on material things, but psi phenomena simply can't be explained in that framework; they open us up

to a larger reality. To state it in another way, psi phenomena are *paraconceptual*.

We have four major categories of psi phenomena. These are phenomena that have dozens, to hundreds of well controlled laboratory experiments attesting to their existence. The first of these is *telepathy*, or mind to mind communication. The typical laboratory experiment that established it goes something like this: You take a deck of cards, shuffle it thoroughly, and look at one of the cards every five seconds, trying to send it. Meanwhile, someone else, who is in another room totally out of sensory communication with you, writes down what they think that card is every five seconds. At the end, you apply some statistical tests to see if there were enough correct responses so that you can't write it off as guessing. You can't always produce telepathy or any other phenomena on demand, but you're not just getting chance results.

The second major category is *clairvoyance*, the direct perception of the physical world without the use of the normal senses. In classical clairvoyance experiments, you shuffle a deck of cards without looking at it and then put it in your desk drawer. Nobody knows what the order of the cards is, so there's no possibility of telepathy. You ask someone to write down the order of the deck of cards. Clairvoyance works about as well as telepathy in terms of getting statistically significant results and in terms of amount of information transferred.

The third major category is *precognition*. Again the experiment is simple. You tell someone that an hour after she leaves, you're going to thoroughly shuffle a deck of cards without looking, and ask them to please write down *now* what the order of the deck of cards will be. Precognition experiments also often show statistically significant results.

The fourth major category of psi phenomena is *psychokinesis* (which used to be called telekinesis). Psychokinesis is the direct effect of mind on matter. In the old classical experiments a wonderful Rube Goldberg machine would throw dice on a table at the push of a button. You'd be told, "Make 6's come up this time," and the next time to make 5's come up, and so forth. PK is largely a statistical effect. It's not as if it comes up all 6's when you try that and all 5's when you try that.

Today, this kind of experiment is done with electronic devices. You look at a box full of little chips that has two lights—one red and one green. These lights flash back and forth in a 50/50, random selection. You're told, "for the next five minutes make the green light come on more than the red one; then for the next five minutes make the red one come on more than the green one" and so forth. Some people take what should be a 50/50 distribution, and they reliably get 51% or more of one color or the other. In the old dice test, you could imagine your mind giving one of these falling dice a little "nudge" at the right time to make it come up. By contrast, where do you "nudge" this electronic circuitry? Nevertheless, it works.

There are several other psi phenomena which are probably real, but the evidence isn't as overwhelming simply

because they haven't been researched as much. However, they're very important in the context of the new view of what our human possibilities are. One of these is psychic healing. There's some excellent evidence for it, but I'm just going to mention it in passing and refer you to Bernard Grad, one of the leading authorities and pioneers in psychic healing, who speaks about it in more detail.

The second phenomenon that I want to mention is out-of-body experience. This is fairly well known now because it's often, but not always, a part of near-death experiences. In an out-of-body experience, you find yourself out of your physical body and at a different location, but you don't write it off as a dream because your mind seems clear. It does not *feel* like a dream. You can argue with yourself about how impossible this is, but nevertheless there you are, floating near the ceiling, looking at your body in bed. A study I did a number of years ago shows how you can bring this into the laboratory. A young woman mentioned that ever since she was a kid, several times a week she'd wake up in the middle of the night floating near the ceiling looking at her body in bed. When she was a kid, she didn't know this was odd; she thought it was just one of the parts of sleeping. I had her spend several nights in my sleep research laboratory because I knew that near-death experiences often produced this, and I wondered what was happening physiologically in her body. In short, she showed some interesting physiological changes but nothing that would worry a physician. You don't have to be near death to have an out-of-body experience.

Before this woman went to bed each night, I put a five-digit random number written on a piece of paper up on a shelf near the ceiling. She couldn't see it lying in bed or walking around, but she could if she were floating near the ceiling. I asked her when she got out of her body to get up there and memorize that number and then wake up and tell me about it. On most occasions she would just say, "I had an experience but couldn't get up to see the number." On the one occasion she did see the number, she correctly told me the five digits. The odds against guessing a five-digit number the first time are one in one hundred thousand.

The other major category I want to talk about is the survival of death. Out-of-body experiences seem to contribute to belief in survival. There has been direct investigation during the last century into the accounts of spiritualist mediums who purport to be in contact with deceased spirits. You don't want to just accept this off-hand, because we know people have delusions. You want to talk to one of these spirits and identify them, so you ask information about them. It turns out most of the information from the ostensible spirits is kind of vague and general. It does not convince one that these are the actual spirits. On the other hand, in some cases you do get evidential details that are quite convincing.

Because of various methodological problems, very few parapsychologists investigate survival anymore. For example, one might argue that the medium's unconscious mind creates the spirit and is unconsciously using ESP to find information that makes these spirits more convincing. Nobody's found a very clear way to get around this yet.

Personally, I think there's a good possibility of survival. Also, as Dr. Ian Stevenson's wonderful work at the University of Virginia illustrates, maybe there's reincarnation. He has some fascinating stuff.

A psi phenomenon that especially interests me is what's called the sheep-goat phenomenon. Before you do an ESP test, you have people indicate in a questionnaire whether they believe they can use ESP or whether they don't believe in it. If you score the results separately, the believers (sheep) tend to score significantly above chance, and the non-believers (goats) tend to score significantly below chance. Since the sheep think psychic phenomena exist, they show evidence for it. Statistically the scores of the goats are just as surprising as the scores of the sheep. The only way anyone has been able to figure out how you can score significantly below chance is that once in a while your mind has to use ESP to tell what the target actually *is* and then unconsciously influence you to guess anything *but* that particular target. These non-believing goats are using ESP unconsciously to reinforce their belief that there is no such thing as ESP. I tend to technically admire the slipperiness and the cunning of the way we uphold our belief systems, and this is really quite a fancy one.

So, there is a non-physical aspect of mind, call it a soul if you like. The evidence from parapsychology lets us state that, not because we just don't like materialism, but because there's good scientific evidence for these non-physical aspects of mind.

Even here we still deal with the fact that we tend to create our own realities. We still may have selective perception, distorted perception that reinforces our belief system. So it still becomes important to try to tune up our belief systems so they match reality better or to try to perceive even more directly.

Now, this gets down to the final thing I want to talk about and that's how important it is to discriminate. It's really good to have an open mind. Just because something is labeled "psychic" or "spiritual" doesn't mean it's nonsense. There is important truth in these areas. By the same token, there is an enormous amount of nonsense that falls under those two headings. I'd like to see someone do a comparative study to see how much nonsense there is in other areas of life. I'm sure parapsychology can't begin to compare to politics, for instance, in terms of the ratio of nonsense to sense!

We need to constantly try to improve our discrimination of these things. To put this in a more spiritual framework, there's a saying from an esoteric tradition that I like very much: "There is no God but reality. To seek Him elsewhere is the action of the Fall." Now some people interpret that as, "Oh, he doesn't believe in God." No, that's not the point of it at all. The point is that if you're trying to be a spiritual seeker, open yourself to wider realities that include giving your first allegiance to seeking truth. As soon as you say, "This is what I think is the spiritual, and I'm going to essentially ignore anything else," then you are distorting yourself, you take the action of the Fall. ■