

Helping to create transpersonal psychology: Thirty-five-plus years of dynamic interplay between more and less, expansion and fooling ourselves

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In the course of my correspondence with David Fontana about coming over here, we had a lot of humorous exchanges, in which David kept telling me that I was becoming more British. Well now circumstances allow me to make use of the prevailing stereotype by saying, 'Sorry! Sorry that illness has prevented me from being here and so just addressing you via videotape.'

Anyway, on a more serious level, I'm really happy to be able to talk to you. When David Fontana first told me a couple of years ago that a transpersonal section had been formed in The British Psychological Society, I was delighted! That's more than we have in America, where the American Psychological Association rejected the bid for a transpersonal section some time ago.

Now I've always wanted to be a transpersonal psychologist. The problem was there weren't any such creatures when I was deciding on my education and career, so I had to do something to help make such a field possible. That means I am talking to you today because I'm something of an historical figure. I never thought I'd be old enough to be an historical figure, but that's sort of interesting, and it's interesting to do a little reflec-

tion on my career, what sort of changes have taken place and the like.

I did a similar reflection a month ago for an invited address at the American Psychological Association (Tart, 1998) but I must say that was sort of the mainstream (expurgated) version. I'm going to give you the more interesting version today.

My interest in this whole area started out with my personal conflict as a child between science and religion. I was raised a Lutheran. I was quite devout and emotional about my religion when I was young. Then, as I got into my teenage years and started thinking for myself and becoming educated scientifically, I started noticing conflicts. I saw things in religion that really didn't make sense. I began to see enough of the real motives of people around me to realise how much hypocrisy was being tolerated in the name of religion - that was a major conflict. And, of course, there was science that seemed to say there was nothing to religion, it was all nonsense.

I was very lucky because at that time I was a voracious reader and I came across the writings of the people who founded The Society for Psychical Research, I came across

J.B. Rhine's parapsychological writings and the like, and I realised that I was not unique in having this conflict between science and religion. A lot of intelligent women and men had faced it before, and a brilliant solution had been created in 1882 with the founding of The Society for Psychical Research, this decision to use the *methods* of science to try to separate out the sense from the nonsense in religion, instead of simply completely accepting or completely rejecting one or the other. Basically my career has been an attempt to follow that kind of path, to use the *essential* methods of science – not the *scientism* which just throws things out in a dogmatic way – but the essential methods of science to try to figure out what's real about our spiritual or transpersonal nature and what indeed is probably illusion that we should reject.

I sometimes wish I had a more dramatic story about my how my interests developed. I wish, for example, I could relate some experience where God spoke to me and said, 'Young man, you are going to be a transpersonal psychologist!' but I haven't had any dramatic experience like that. It's been a really long, often prosaic, struggle finding some kind of integration between science and religion, but a most interesting and satisfying one!

In terms of my formal career, I became a psychologist, and my earliest research was in hypnosis research and parapsychology – although the parapsychology always got me in trouble with the establishment.

Some changes in psychology

At the University of California at Davis, just before I took early retirement in 1994, I had to teach, for the first time, an introductory psychology course, and I thought, 'This ought to be interesting. I'll have to look at some introductory psychology books and I'll see what's new in the field of psychology.' Well, to make a long story short, most of it looked very, very familiar. It looked like the Psychology 1 course that I had taken more than 35 years ago. There were two major

things that had changed, though. One of them was something I'd actually 'discovered' on my own as a parent: babies were now recognised to be a lot smarter than they were in the psychology books of 35 years ago! A baby was no longer a simple *tabula rasa* that was just passively shaped by the environment. Kids had their own wills, their own dynamics, their own personality. I think all of us parents know that. The other, exciting development, compared to 35 years ago, was that just about every psychology textbook now had at least a section, if not a whole chapter, devoted to altered states of consciousness (ASCs), and since that's been one of my main research areas, that's been especially gratifying for me.

It's still disappointing to look at sections on parapsychology in basic psychology books though. Often they aren't there at all, and when they are there, they are almost always quite negative and biased. Unfortunately I have to say the same thing about transpersonal psychology. In terms of the mainstream acceptance recognised by appearing in introductory text books, transpersonal psychology is still not heard of in most books, or it's given a limited and biased view. We're making some progress but we have a long way to go.

Now I assume I've been asked to talk to you today because my work in transpersonal psychology has helped to create that field, particularly through some of the contributions of my research on altered states or parapsychology. So I thought I ought to try to come up with a comprehensive summary of what's been learned in more than 35 years. I realised I couldn't possibly do that in a limited time, so I'm going to take the more feasible road of more personally reminiscing about some of the highlights of my career.

That isn't a very usual way for me to talk. I'm usually a very serious speaker, I talk about experimental results, the methodology for arriving at knowledge, and so forth, but I'm going to try to be more of a story teller this evening. But I warn you that the method-

ologist is going to keep coming through, because I'm still quite concerned about how we come up with useful and valid knowledge in our field. And, of course, because of lack of time, this is going to be mainly highlights rather than anything really comprehensive. I'm also going to skip things like the political side of doing research in parapsychology and transpersonal psychology, which has created a lot of trouble for me. We all understand about that, and it's too depressing to talk about anyway! So, let me get on to more substantive material

Two dynamic dimensions

One of the things I'm constantly advising students about their writing and speaking is that it's important not to lose sight of the forest for the trees. I have a lot of fascinating trees in my career, but in order to keep some sight of the forest, as it were, there are two major dynamics, two major themes that have run through it that I'm going to use as an organising framework. One is what I might call the extension or expansion dimension, the More dimension. That is, our concepts of what it is to be a human being are too narrow and we need to extend them, to see what more we could be; that we have to look at other possibilities we have, things like ASCs. Too narrow concepts actually create unnecessary suffering, because they rule out and suppress parts of human nature that are important.

The 'empty organism' that was so dominant, because of the behaviouristic influence in psychology, when I was in graduate school, for instance, created a lot of unnecessary suffering by making us ignore and suppress things that we should not have ignored. It devalued important aspects of human behaviour and led to silly conclusions about life. I remember thinking back then, for example, that if you take the empty organism view that only external behaviour is important, then you would come to a conclusion that LSD, for instance, must be something like a tranquiliser because people

tend to sit still most of the time they are taking the drug. That's so silly!

The other major theme that runs through all my work, a factor that balances the More theme, is what we might call the delusion theme, the Fooling Ourselves dimension. I've become more and more impressed with the way in which we can create delusory ideas and make them into an experienced 'reality.' This is the way in which we can have illusions and biases and live in what the Easterners call *samsara* or *maya*, in a world of illusion (I'll elaborate on this later).

These Fooling Ourselves illusions can be materialistic, or they can be transpersonal, spiritual kinds of illusions. I think of these sometimes as the reductionistic, materialistic illusions, on the one hand, the too narrow perspective of 'It's all *nothing but* the brain, it's all material,' and, on the other hand, the airy-fairy illusions – the wonderful, spacey spiritual ideas – that are probably not true.

So there's been a constant dynamic tension between these two themes in my career. More: trying to open up to new possibilities, extend our views on the one hand, and Fooling Ourselves, watching out for the powerful tendency to delude ourselves in order to feel good, on the other hand.

Personal background

Because of the dramatic subject matter of some of my career, I think I should say a little bit about the background of who I am, especially because people think that someone who has investigated ASCs, transpersonal psychology, parapsychology, and the like, must have a very wild inner life or at least an extremely interesting mind.

The truth is, I'm terribly stable, pragmatic and practical in my orientation. I'm relatively unhypnotisable, for instance, in spite of all those years doing hypnosis research – I'm not particularly suggestible. I tried meditation off and on in many forms through the years and the main result of it for a long time was getting a sore back and feeling bored. When I hear about people who, after five

minutes of meditation, have these wonderful meditation experiences, I sometimes feel quite jealous! I can finally experience relative clarity and calmness in meditation now, but nothing at all spectacular by our usual standards.

If anything, I tend to be over stabilised. It's usually difficult for me to personally experience any kinds of ASCs. There were many times I wished that wasn't so: in investigating things like ASCs and transpersonal experiences, I'd like to have at least some personal experience of them to have a direct feel for what it's about and not just depend on my intellectual understanding of what goes on. So, I wish I had more, but I'm not a natural mystic or anything like that.

I have had a fair number of spontaneous parapsychological experiences of knowing about something that is happening at a distance. Most of them have been with my wife. In fact, my wife Judy and I get into these quite silly arguments: when she says something that I've been thinking about or vice versa, we then argue for fun about who thought of it first and who read whose mind! In general I pay little attention to these personal telepathic sorts of flashes unless they give me some idea about mechanism, or some way psi could be studied to understand more about it.

So, I try to understand altered states. I try to experience them when possible, but remember, I'm over stabilised. Now, being over-stabilised, I'm running the risk of being ignorant, of not having enough of an experiential feel for what's going on to really do sensible research on it. But the other side of this coin is that if you have lots of wonderful, far out sorts of experiences, people begin to wonder about your stability and your rationality – and it can sometimes indeed mean that your imagination is running away with you. Here's that dynamic between, opening up but not getting carried away, More or Fooling Ourselves.

I'll tell you a story that illustrates this very nicely. Back when I was in graduate

school there was a lot of research being done on drugs like LSD, but there was already tremendous controversy over how this research should be done. According to a widespread story at the time, a couple of psychiatrists decided they wanted to do research on psychedelics as a team. Should they take LSD themselves before they did their research on others, they wondered? There were schools of thought that said that if they hadn't had the experience themselves, they would have only the shallowest understanding of what happened with other people, and their research would be trivial.

But there was also another powerful school of thought that said if they took something like LSD themselves, their brains would probably be permanently damaged, and we wouldn't be able to trust any research these psychiatrists did.

What could they do? Well, they came up with an ingenious solution. They said they would 'compromise.' One of them would have an LSD experience, the other wouldn't and then, hopefully, working as a team, they could compensate for each others biases and ignorance. So, they flipped a coin to decide who would take it and one of them had a personal psychedelic experience.

Now often when I tell this story, somebody asks me, 'Who got to take the LSD, the winner or the loser of the coin toss?', but I don't know that particular detail. So, as I said, I am terribly pragmatic, terribly practically oriented, but very interested in the transpersonal.

First study: Hypnotic projection

Let me get into one of these research stories. The first real research I ever did was in 1955, when I was still a student of electrical engineering at MIT. I was going to have a respectable profession as an electrical engineer before I moved over to psychology! I was one of those amateur hypnotists I now warn people about. Luckily I never got into any trouble.

I had been reading heavily in the literature of psychical research and in hypnosis for

years, and I wanted to do a study to see if hypnosis could produce an out-of-the-body experience in people. I selected some fellow students who had at least moderate susceptibility to hypnosis and carried out some experimental sessions where they tried to leave their body while under hypnosis, project to a basement in a distant house several miles from campus, and tell me what was in that locked basement. I had previously arranged with a couple of parapsychologists who lived there, Betty and Fraser Nicol, to pick out some very unusual objects and put them on a table in the middle of that basement floor.

Looking back, I realise this was a poor experimental design. Only a spectacular result would have been obviously significant. I had no way of objectively judging whether they were getting any lesser degree of genuine psychic contact. It had to be exact or not – and it wasn't exact, unfortunately. But this was a start, this was the kind of thing that got me interested in this field. I noticed some transpersonal effects in this experiment too – in some of the hypnosis training sessions before the projection attempt, people reported changes in consciousness that weren't just ordinary hypnosis. This got me alerted to the transpersonal dimension. More details about this first study are available elsewhere (Tart, 1998). I had tried to add to the More dimension. On the Fooling Ourselves dimension, I hadn't figured out how to objectively evaluate.

Second study: Zapping myself!

My second research study was done about 1960, and led to one of my first professional publications (Tart, 1963). It was published as *Physiological correlates of psi perception*.

I was very interested in the fact that most spontaneous psychic experiences seemed to take place under crisis conditions. A mother suddenly has a dream about a son who has been in India for years, for instance, she dreams he's trampled to death by an elephant, and a month later she gets a letter

from his regiment commander saying this had indeed happened on that day. Tragedy seems to stimulate strong psi effects. Now you obviously can't create real tragedies in the laboratory, but, I thought, could I create an *emotionally intense and meaningful* stimulus in the laboratory? Not just an emotionally sterile, purely intellectual procedure like guessing cards, but something with strong feeling? So I did one of my most interesting experiments – that no one else has ever repeated, for some strange reason...

A subject would come in and spend a couple of hours in a soundproof chamber normally used for sensory deprivation experiments. He would be wired for physiological measures – brainwaves, heart rate, skin resistance – standard sorts of psycho-physiological measures, although with sensitive equipment that was cutting edge for that time. By all ordinary standards, each subject was then given nothing but a sensory deprivation session. Nothing of any ordinary sort happened. Each subject sat in the dark for a couple of hours. Just before the session started, though, the subject was told that once in a while, at random times, he might get a 'subliminal stimulus.' Something very, very faint. And if he thought he got one, he should press a button on the arm of his chair.

The stimulus involved my emotional reactions. I was in another laboratory room. At random intervals during that two-hour isolation period, I received an electrical shock on one of my ankles, adjusted to be as severe as I could handle without crying out aloud or thrashing about. This was an emotionally significant stimulus for me!

I would read an absorbing book before and after shocks, try not to think about the experiment – and suddenly I would receive this intense, painful, stimulus. During that shock time I tried to telepathically send a message to the subject in his soundproof room that *something important was happening!* It was certainly important to me!

The results of this study were very interesting. The physiological measures showed

that the subjects showed statistically significant signs of activation when the shocking was going on and not during control periods, but their conscious guesses – when they pressed the button because they thought something had happened – showed no relationship to the stimuli at all. It alerted me to the fact that we may receive psychic information and influences without it reaching the level of consciousness. A little bit of More.

Controlling nocturnal dreams through hypnosis

My first study focused primarily on ASCs was carried out in 1962 and 1963, when I was doing my Masters Thesis and Doctoral Dissertation research at the University of North Carolina in Chapel Hill. Both of these were concerned with using posthypnotic suggestions to try to influence the dreams that people had during the night. I selected very susceptible people and trained them in hypnosis. They were also picked because they were good dream recallers. In evening sessions, before they were wired up to spend the night sleeping in the laboratory, I would deeply hypnotize them and suggest something like: 'In your sleep tonight, all your dreams will be about A, B, C, D and E.' I would specify a large number of things they were to dream about. I would then wake them during the night when their EEG patterns showed they were in Stage 1, rapid eye movement (Stage 1-REM) sleep.

I discovered that you could have tremendous influences on the content of night-time dreams with post-hypnotic suggestion. I also found you could push the natural sleep rhythm a bit. You could make the Stage 1-REM periods about 10 per cent longer or 10 per cent shorter. This was interesting because people thought these were basic, highly stable biological functions that weren't affected psychologically (Tart, 1964; Tart, 1964; Tart, 1965). So I had added to our knowledge on the More dimension.

At the time that I was preparing for this research, the Fooling Ourselves dimension

manifested to me in a most amusing form. As part of researching dreams I was reading everything I could find on the subject and I came across a book by a British philosopher (Malcolm, 1959) who showed, quite conclusively and logically, that there were no such things as dreams! I was so upset by this logical 'proof' that dreams didn't exist that I had unpleasant dreams about it all night long! It was a good example that we need to put data first and let theory come in afterwards, to not take reasoning too seriously just because it seemed 'reasonable.'

Fooling ourselves: Making the psyche real through physiologising

My thesis and dissertation research was a major demonstration to me of how much we limit ourselves also. Dream research had become almost passé in psychology because of the influence of behaviorism. We discovered patterns of brainwaves and REMs during the night such that if you woke people up at these times, they recalled dreaming 80–90 per cent of the time: suddenly dreams were *real*. This was a silly conclusion to reach – a dream is real when you experience it – but because we're so caught in physiologising, or materialistic reduction as a way of justifying what we do, we needed the stimulus of the physiological correlates of dreaming to make dreaming real somehow...

I saw the same thing happen many years later when Keith Wallace published his article in *Science* on physiological correlates of Transcendental meditation (Wallace, 1970). Suddenly meditation, this 'schizophrenic-like' activity done by in people in underdeveloped countries had a brain correlate and became 'real' to us.

The Stage 1-REM correlation helped justify my dream research at the time, but a lot of the dream research that then followed didn't need to know the physiological correlates of dreaming. Nevertheless, that political justification was very important in allowing it to happen. I suppose if someone discovers

a physiological correlate of enlightenment, enlightenment will become real...

Getting my attention – The thousand dollar mule

During these graduate school years, a major change came about in my understanding of ASCs. A way to illustrate this is to tell you a traditional American folk tale I've always loved. It's the story of the Thousand Dollar Mule, an old story, when a thousand dollars was actually *money*.

There was a farmer in Missouri (folk tale farmers are noted for their stinginess in Missouri) who needed a new mule. He had heard about another farmer selling Thousand Dollar Mules, which was ridiculously high priced! But there were so many good stories about what excellent workers these Thousand Dollar Mules were that this farmer finally made himself part with this fantastic sum of money to buy one.

He brought it back to his farm, hitched it up to the plough and said 'Giddy-up!' And nothing happened. In fact, nothing he could do would make that Thousand Dollar Mule do anything!

Well, the farmer was disappointed and, of course, furious! He took the mule back to the seller and demanded his money back, saying he had been gypped, this was not a superior mule, this was a totally worthless one, blah, blah, blah, blah, blah.

The seller refused to give his money back. The seller insisted that no, this is indeed a superior mule. *But*, the seller eventually allowed, the mule needed *training* – and the training would cost another thousand dollars.

Well this news broke the farmer's heart, but he couldn't get his money back, he had to have a mule to do the work, so he finally parted with his other thousand dollars. 'All right, train him,' he said.

The seller said, 'O.K., I'll start the training right now' and he walks off into the barn. He comes back with a huge mallet, walks up to the mule and whacks it on the head! The farmer is shocked and enraged: 'You're hurt-

ing my Thousand Dollar Mule! You'll kill him! What are you doing?'

The seller says, 'No, I'm not hurting him, just starting his training. To train this mule, *the first thing you need to do is to get his attention.*'

Well, in talking about being over-stabilised before, I've often compared myself to the Thousand Dollar Mule. It's hard to get my attention in terms of altered state things. But something happened that got my attention.

While I was in graduate school I had an office in the Psychiatry Department. One of the psychiatrists there (Martin Keeler) had a grant for doing research with drugs like LSD and psilocybin. I was a subject on quite a few occasions for him, as well as having been fortunate enough to have an earlier experience with mescaline (Tart, 1983). Psychologically, these drugs were the mallet that hit me, this mule, on the head and got my *attention!*

I participated many times, as a subject. That involved taking several psychological tests each time. Those of you who have ever taken the Minnesota Multiphasic Personality Inventory (MMPI), with its' 400 plus questions, will know what I mean when I say that I took the MMPI at the peak of the psychedelic experience many times – and it was something of a heroic act to stick with it! (My MMPI profile, interestingly, tended to come out more normal than the way than it would ordinarily.) But, the important thing to me was that I got to directly understand things which had just been abstract mental concepts for me before. Experiences like *disassociation* or *synesthesia* or *hallucination* or *suggestibility*; they became real phenomena, I got an inside look at what they were all about. These experiences have been immensely useful to me in understanding these reactions in others and in milder form in myself since then.

That was the Expansion, the More dimension. I was tremendously opened by these psychedelic experiences. I was also sensitised to the Fooling Ourselves dimension, the delusion dimension, in these same psychedelic experiences.

Fooling ourselves – assessing or creating?

To give you an example, one of the many tests we subjects had to take practically every time we did a psychedelic drug experiment then was a 'symptom' questionnaire checklist. We had a couple of hundred 3" x 5" index cards. Each would have a particular 'symptom' written on. You were supposed to read each one while you were intoxicated, decide whether it was true or false for you at the time, and put the card in a box labelled *True* or a box labelled *False* as your way of responding.

When I first took this test I took it all very seriously, was I experiencing that effect or not? But after doing it a while I began to realise, since I am an introspective type, that simply reading the description of the symptoms actually acted as a *suggestion*, as an induction procedure. So I'd pick up a card and it would say something like, 'My palms are sweating green sweat.' I'd think, 'That's interesting, that would be fun' and I'd read it again and again, 'My palms are sweating green sweat, my palms are sweating green sweat...'. By about the third or fourth reading my palms *would* be sweating green sweat, I would see it! Then I'd throw that card in the *True* box.

I'd pick up another one that would say something like, 'I'm becoming anxious.' I didn't want that to become true, so I'd throw that card in the *False* box right away, before it became true. I realised that what we thought of as tests were also actually induction procedures. They were actually suggestions that could change what was going on. We weren't simply testing what was going on in the altered states induced by psychedelics.

So, the truth, the mallet, hit me over the head. I had psychedelic experiences, my attention was firmly stimulated. Like the story of the conflict with the two psychiatrists I mentioned earlier, I had chosen the road of the 'biased' rather than that of the 'ignorant.' But there is a difference here. *I know I'm biased.* In all sorts of ordinary ways,

as well as ASC ways, I know I'm quite biased. I want things to be *this* way and not *that* way. I don't believe that somehow I am a perfectly objective experimenter who is simply looking for The Truth. I'm biased.

But *knowing* I'm biased and knowing also that I really care an awful lot for the truth, I can try to detect them and then take precautions to filter out or compensate for my biases, instead of just letting my biases run unconsciously and produce pseudo results that seem to validate them. If I have to make a negative point, I think perhaps this is the most important one. Too many psychologists assume they are not biased and their biases run rampant. If you *know* you're biased, you can at least do something about them.

Post-doctoral training – California and the psychedelic revolution

I was pleased with the outcomes of my thesis and dissertation research, and with what I'd learned from psychedelic experiences, and I wanted more training. I had been offered a postdoctoral fellowship with Gardner Murphy at the Menninger Foundation in Topeka, Kansas. I greatly admired Gardner Murphy. He was a psychologist who, even back in the 1960s, was saying *we had something to learn from Easterners*, that there was valuable psychology embedded in Eastern spiritual systems.

My advisors at the University of North Carolina were horrified! They worried about an impressionable young man like me being influenced by someone like Gardner Murphy, who they thought was a wild man, so they went and 'saved' me from Murphy's influence. They found me a post-doctoral fellowship in California – at the height of the social movement we call the psychedelic revolution! So I went to California instead of Kansas. Well now, thank goodness I was saved...

That was actually a good thing to do, even though I'm sure studying with Murphy would also have been excellent. I had a post-doctoral fellowship with Ernest Hilgard at

Stanford University. He had an extensive hypnosis research programme in progress, and Hilgard was an excellent role model for me, a model of a gentleman as well as a scholar and a scientist. Those were very educational years.

I received lessons on both the More and the Fooling Ourselves dimensions while at Stanford. Let me give you an example of the latter dimension.

Experimenter bias in hypnosis research

One of the big laboratory projects we did at Hilgard's laboratory centered around the question of whether hypnosis actually increases people's suggestibility. There was (and still is) a considerable quarrel in the scientific literature about whether hypnosis was an ASC. Was something really different? Or was it just ordinary suggestibility in a special situation, and there's really nothing odd going on? We decided we would run a large number of subjects – as I recall it was on the order of a couple of hundred – and half of them would randomly be assigned to a non-hypnosis group, where they would just be chatted with for a while and then be given the standardised hypnotic suggestibility tests, and the other half would get to a formal hypnotic induction first, the one in the Stanford Hypnotic Susceptibility Scale (Weitzenhoffer, 1965). Would those who went through the hypnosis induction procedure, who were, to at least some extent, hypnotised, be more suggestible than those who didn't?

Crucial to this type of experimental design, of course, is having a standardised, objective measure of suggestibility. We thought it was standardised and objective. You basically read standardised suggestions to subjects, suggestions like 'Think about your arm. Your arm is now feeling heavy, feeling heavy, relaxed and heavy, starting to get heavy...' etc. You read this stuff literally word for word.

Because of my introspective nature, I do a lot of self-monitoring, so I noticed from

running my first few subjects that I was not giving the suggestibility tests *exactly* the same. If I had gone through the procedure of reading the standardised hypnotic induction to a subject, I might say something like, 'think about your arm now' in a subtly different tone of voice than if I hadn't gone through the induction procedure. Now, if I wasn't giving the standardised test in the same way in both conditions, the whole experiment was flawed, at least for my data! And suppose other experimenters were like me? We had about a dozen people who were acting as hypnotists in this study.

I brought this observation up at our next staff meeting. I discussed some of the early findings by Robert Rosenthal on experimental bias (Rosenthal, 1963). I worried about the effects of this possible bias. I was trying my best to administer the suggestibility tests the same way, whether the subject had gone through the hypnosis induction procedure or not, and saw that I couldn't.

Well, the others thought I was silly, perhaps 'morbidly introspective' or something like that. They were all trained psychologists or advanced graduate students, they were reading standardised instructions in a standard way and had noticed no problem. But I do have a stubborn streak. So, I said, 'Alright, if there's no problems, then no one will mind if I put a microphone in each of the laboratories and make tape recordings of all of us giving the standardised instructions? And then give them to blind judges to see if they can discriminate them?' And, of course, no one had any objections, because there would be nothing to be found...

To make a long story short, my blind judges could significantly discriminate whether a subject had gotten the hypnotic induction suggestions first or whether they had just gone through the waking state conditions. The experiment was flawed, we had to do the whole thing over again with tape recorded suggestibility tests so they would indeed be given exactly the same way each time.

This finding frightened me in a way. This was not a bunch of naive experimenters. They were professional psychologists, as well as graduate students, who *knew* how crucial it was to do things in a standardised way, who *knew* that bias would spoil the work. They had been sensitised to bias, knew they were being monitored for bias, and thought they weren't showing any – and nevertheless they showed it. This really brought the Fooling Ourselves dimension home to me.

Induction procedure does not necessarily equal an altered state

Now the question, are hypnotised subjects more suggestible? Yes, we found people who had gone through an hypnotic induction procedure were more suggestible (Hilgard, 1966). But, you notice I've changed things slightly here. I didn't say 'hypnotised subjects.' I said people who had 'gone through the hypnotic induction procedure' were more suggestible. That's because of another methodological problem I've learned is widespread, viz. the common *equation of an altered state of consciousness with the presence of the induction procedure*. It leads to a lot of trouble. I don't know how many studies of 'hypnosis' have been published where the person was 'hypnotised' if the hypnotic induction procedure had been administered to them, if the hypnotist had said the magic words, and they were not 'hypnotised' if it hadn't been read to them. Or the person was counted as a 'meditator' if they were given meditation instructions, etc.

To me, this has always been silly. If a person isn't hypnotisable, administering the induction procedure just bores them. In a really talented hypnotic subject, on the other hand, the suggestibility 'test' procedure may constitute a hypnotic induction as well as a test, just as the 'My palms are sweating green sweat' could act as an induction! So, I've constantly made the methodological point throughout my career that you must decide whether a person is in an ASC by actually

assessing their state, not by simply whether or not they've been subjected to some kind of induction procedure.

The latter way is certainly more 'objective.' Everyone can agree whether the subject went through the procedure or not, it's behaviouristically correct, but it simply leads to a lot of foolishness. Inductions work to various degrees and sometimes not at all.

More – humanistic psychology

This Fooling Ourselves dimension that was manifesting in the early 1960s while I was at Stanford was also balanced by some very rich manifestations of the More dimension. I began visiting an intentional, humanistic psychology growth community, The Bridge Mountain Community, for weekend programmes (Tart, 1966). Humanistic psychology was, to me, the hottest thing in psychology then. I received a lot of training there which was essential for me. I hadn't realised before then, for example, how totally intellectual I was, how much I lived just in my head, and how poorly developed my conscious emotional and bodily sensitivity was. Here I got hands-on training (the phrase is literal for some of the work, as it involved massage training) on becoming emotionally sensitive, becoming sensitive to my body, and becoming sensitive to the emotional and bodily aspects of others' communications.

I still think I'm primarily an intellectual, but I've gradually worked my way up to a reasonable (note that intellectual word!) level of functioning on bodily and emotional intelligence. But this kind of humanistic psychology training experience at places like Bridge Mountain and Esalen Institute was really important in opening me up to these more subtle dimensions that are part of an every day life, not just transpersonal psychology.

This also led to an interesting event years later at the University of California at Davis. A colleague, Joseph Lyons, who had also had some training in humanistic psychology, and I decided we'd like to teach a course on human-

istic psychology. (It later became a course on both humanistic and transpersonal psychology.) You need to get course offerings approved by the faculty, so we took our proposal to the Psychology Department faculty.

Our colleagues were very suspicious of a course in humanistic psychology. They had heard about humanistic psychology. People may *touch* each other and they have *emotions!* They have *experiences* and *feelings!* What does this have to do with university study? They were not sure they were going to let us teach this course, there was no place in a university for experiences and feelings...

We were finally persuasive enough that they agreed we could teach a course in humanistic psychology *if* we made it clear to the students, at the beginning of the course, that while we might occasionally offer some exercises that could lead to experiences, no one was actually *required to experience anything* – and experiences or lack of them wouldn't have any effect on their grades!

Out-of-the-body studies

After my post-doc with Ernest Hilgard at Stanford, I went to the University of Virginia for a year and worked a bit with Ian Stevenson. I developed an enormous respect for the research he was doing on reincarnation, and also realised that I was not going to get involved in reincarnation research, until I was ready to devote my life to it, because to do it well was enormously time consuming.

I also met Robert Monroe, the man who wrote *Journeys of the Body* (Monroe, 1971) while I was there, since he lived in Charlottesville. Bob was a prototypical American businessman – who began spontaneously having out-of-the-body experiences (OBEs) and ended up years later opening an institute to teach people how to have OBEs on their own. This was a fascinating time.

The late 1960s saw me publish two studies on out-of-the-body experiences. One (Tart, 1967) was with Robert Monroe as subject, where he slept in an hospital EEG laboratory (not the world's most comfortable

bedroom) for several nights and tried to have OBEs, with ambiguous results. I had asked him to go into another room while out of his body and read a target number, but he didn't succeed in that, although he did describe some things about what was going on in the other room that were suggestive of psi and showed some interesting EEG patterns. I was later able to do some further work with Monroe in California (Tart, 1969).

The other OBE study led to fascinating results (Tart, 1968). I met a young woman I have called Miss Z. She was a nursing student who was our occasional babysitter. Once she became a friend of the family, she realised it was alright to talk about unusual experiences, so she began talking about an unusual sleep experience she had repeatedly had ever since she was a child, and still had occasionally. Sleep to her would be – you lie down, you go to sleep, you have a dream, you sleep, you float up to the ceiling for a while, looking at your body lying in bed, you fall back asleep, have a dream, wake up and do your morning stuff. As a child, these had happened frequently and she did not know that it was unusual to be floating near the ceiling and seeing her body lying in bed! She mentioned it once or twice when in high school and learned to keep her mouth shut, that it was unusual.

I was, of course, fascinated. Miss Z asked me, was she really out of her body, or was this just some kind of special dream, even though it seemed real? I suggested an experiment she could do at home to decide for herself. She could take index cards with the numbers 1 to 10 written on them, mix them up, and, as she was going to bed lay one out on the bedside table without looking. If she happened to float near the ceiling that night she could memorise the number and check it in the morning.

To make a long story short, I saw her a few weeks later, she said she tried it seven or eight times, she was always right about the number, and was there anything else interesting we could do?

She was moving to a new job across the country very shortly, but I was able to have her spend several nights in my sleep laboratory. I was extremely interested in what happened physiologically as well as parapsychologically when she had an OBE. I knew about near death experiences then, although they hadn't 'come out the closet' yet with Western culture denying death so strongly. Was her heart slowing, was she having some kind of stroke? What was going on when she went OBE?

Miss Z spent several nights in my laboratory. After she was in bed, I would generate and write out a five-digit random number, put it on a shelf up near the ceiling, so that she couldn't possibly see it lying in bed, even if she sat up. She couldn't sit up or get out of bed, of course, because this would have pulled the electrodes off and scattered ink from the EEG machine's recording pens all over the monitoring room.

She had several brief OBEs. In most of them she said she wasn't able to control her movements enough to be able to see the number, but she was good about saying about how long they seemed to last, how long it took her to wake up and so forth. I could look at the physiological recordings with this information and see what patterns went with her OBEs.

The physiological finding was that her OBEs were not any kind of medical emergency, her heart wasn't stopping or anything like that. Further, Miss Z showed an interesting brain-wave pattern of slowed alpha rhythms during her OBEs. If I ever wanted to work at experimentally inducing OBEs, I would try to incorporate some biofeedback training to produce a state of slowed alpha. But otherwise her OBE EEG pattern was not a standard Stage 1-REM dream pattern, so she was having a unique experience in a unique physiological state.

On the one occasion when she said she was able to see the target number for the night, she correctly told me that the number was 25132. Now that's 100,000-to-1 odds of guessing a five-digit number by chance alone.

Now I've never made too much of these number reading results because this was a first experiment in the area, designed mainly to show the feasibility of studying something as exotic as a person's mind apparently leaving their body while in the laboratory, where you get more accurate observations of what is going on. I've never claimed that this study *proves* that Miss Z was out of her body or something like that, although I've frequently been attacked by pseudo-sceptics who think I'm making that claim. One of my sadnesses is that the Miss Z results did not inspire hundreds of scientists to go find people who could have OBEs at will and study them in the lab.

I often get an interesting reaction when I tell the story of this experiment. Someone in the question period will ask something like, 'Did you know what the target number was?' And when I admit that I knew, they'll say, 'Well, she wasn't *really* out of her body, it was just telepathy.' Well, I'm sorry, I have to admit I wasn't up to controlling for 'mere telepathy' in the first experiment of this sort! Ah, the wisdom of hindsight...I suppose I was too fascinated with the More dimension to think of this aspect of the Fooling Ourselves dimension. New studies should use computer generated random target displays, unknown to any living soul. Then people can complain that any psi results will be due to mere clairvoyance.

The altered states anthology

Well, this brings us up to the late 1960s. 1969 was when I probably made one of my most important contributions to the More dimension of seeing what we are. That's when my *Altered States of Consciousness* book was published (Tart, 1969). Previous to this I had vigorously searched all sorts of research literature and knew there was actually an interesting, although small amount of research on various ASCs, but it was so scattered that it made no impression on anyone because no one was likely to encounter any more than a tiny part of it. By bringing it

together in anthology form, at a time when there was a great need for people to have some scientific knowledge about ASCs (remember the psychedelic revolution was still going on), all sorts of interesting things happened. People began to teach courses on ASCs because they could now use my book as a text.

1969 was a long time ago. With ambivalence, I'm sad to say that my *Altered States* book is still one of the best books available¹ – because I had hoped that the book would stimulate so much research that it would be quite obsolete within ten years! While there has been a lot of research in a few areas of ASCs, most areas haven't been touched much and *Altered States* is still a good introduction to them. I still use it as a text book in my courses at ITP. Needless to say, I'm glad the book had such good effects, but I sure wish that it had become obsolete.

Transpersonal potentialities of deep hypnosis

1970 saw the publication of an article on the transpersonal potentialities of deep hypnosis (Tart, 1970). It was part of a transition from my hypnosis research, which had been one of my main focuses, to a more general interest in ASCs. I had been working at UC Davis on influencing various aspects of nocturnal dreaming with some extremely talented hypnotic subjects, people who could go into hypnotic states far deeper than you usually see in the laboratory. So in addition to the continued research on influencing night time dreams, I wondered just what happened when they went very deep and the answer, to make it brief, was that hypnotic states began to sound more like mystical experiences. I would ask a deeply hypnotised subject, for instance, about what the nature of their identity was in these extremely deep states. He might tell me something like 'My identity is *potential*. It's not like anything in particular. It could be

anything in the entire spectrum of infinite possibilities.' A very interesting kind of change from our ordinary personal identity!

Consciousness and time, more and fooling ourselves

In the mid 1960s I also had another good example of the Fooling Ourselves dimension. Ever since I was a kid, if I needed to wake up early because the family was taking a special trip or something, I didn't need an alarm clock. I could just tell myself to wake up at 5:30 a.m. or whenever, and I'd wake up then. As a psychologist, I realised I had never read that anyone had actually tested this particular ability to see how widespread it was or how accurate it was. So I did a simple and obvious experiment. I found a few dozen volunteers, students, while I was at Stanford from 1963–65, and gave them booklets that contained a list of randomly picked odd times, like 3:16 a.m., and told them look at one target time before you go to sleep each night, record whatever time you wake up and mail the results back to me.

I found astounding accuracy (Tart, 1970). There were a large number of people who woke up within minutes of any randomly selected time, with a quite tight distribution of responses around that time. So I wrote it up for publication – and probably had more difficulty getting that article published than anything else I ever wrote! That's why it didn't get published until 1970.

Several journals in a row rejected it, and the rationale rejection for rejection would be in one of two forms. One journal would say, in essence, 'It's impossible for people to have this kind of timing accuracy. Your subjects were lying to you. We won't publish this junk.' The other journals would say, 'Everybody knows you can wake up any time you want. There's nothing new here. Why waste journal space publishing it?'

¹Although officially listed as out of print, signed copies of the book are available by e-mail order through www.paradigm-sys.com/cttart/

On being stoned

The early 1970s saw one of my most interesting studies, the phenomenology of marijuana intoxication (Tart, 1970), resulting in a book with that most interesting title people like to mention when they introduce me, *On Being Stoned* (Tart, 1971)². Marijuana use was becoming quite widespread at the time, so I looked into the scientific literature to try to understand why people were risking going to jail. Well, if you look at the 'objective' scientific findings, what marijuana did was make people's heart beat a little bit slower and make their eyes redder. People risked going to jail for that?

The literature had very little on the phenomenology of marijuana intoxication that was useful. What was that ASC like? So I thought that the proper and powerful way to understand the phenomenology of this ASC was to get a government grant, give large numbers of people marijuana in various doses under all sorts of psychological conditions, look at the interactions of psychological variables with the actual drug effects, etc. – and clearly this was impossible, since the growing hysteria suggested that only research designed to prove marijuana was bad for people would get funded. So I took an easier route to get some data. I had informal conversations with a number of experienced marijuana users, centered around the question, 'What's it like? How do you feel when you are intoxicated?'

From that I developed a more specific set of several hundred questions that I could then give to a larger sample. The questionnaires were anonymously returned by over 150 experienced marijuana users. It asked them both about various effects, how frequently had they experienced them, and also what was the minimal level of intoxication for various effects to come about. The result was the first relatively full-scale phenomenology of what the ASC of marijuana intoxication was like.

My hope was that this study would spur others to do a much larger and more thorough study under a much wider range of conditions. But it hasn't happened, so my *On Being Stoned: A Psychological Study of Marijuana Intoxication*, still, unfortunately, remains the best phenomenology of marijuana intoxication. It's out of print now, but it is available in its entirety over the internet, so that research data is available.

Meditation progress – at last

The 1970s also saw another change in my personal understanding along the More dimension. You'll recall I said that I had tried various kinds of meditation and was never any good at it. I tried to concentrate on just one thing, for example, and if I could hold just one thing for all of two seconds, I thought that was an amazingly successful meditation! Well, the early 1970s was the time when the Maharishi Mahesh Yogi came along and Transcendental Meditation (TM) became very popular. I thought it all sounded a little too good, but they kept advertising that TM would work for *anybody*, even an idiot. I thought, 'OK, given my previous level of non-accomplishment of meditation, I'm an idiot, so I'll give it a try.' It worked. For a couple of years I regularly did TM and published a report of the phenomenology of my experience of TM (Tart, 1972) in the *Journal of Transpersonal Psychology*.

TM was useful and interesting to me. It didn't produce what I expected it to, but I found it freed up my unprocessed psychological material, so it 'bubbled to the surface,' as it were, and got into the consciousness. Somehow it was then finished. Gradually older and older unprocessed material came through and was processed up and finished. Very interesting process. I also found TM interfered with my ability to enjoy a glass of wine before dinner. I felt ambivalent about that. Before TM, I experienced that having a

²Note that a number of my books which are officially listed as out of print are still available through www.paradigm-sys.com/cttart

glass of wine made my consciousness a little mellow and interesting. The TM made me see that it just made my consciousness sort of dull and boring, so I gave up wine at that time, which was an unanticipated but interesting kind of effect.

So in the 1970s I was seeing more of the inside of the mind, having had psychedelic experiences, meditation experiences, and humanistic training. I had also seen more and more of the ways in which we can fool ourselves, and was becoming more and more concerned about that. A lot of apparent personal growth and spiritual growth could turn into just having more comforting sorts of illusions. So I became increasingly concerned with how do we apply science to the spiritual, to the transpersonal, in a way that makes us get a more accurate understanding of what actually works, what actually goes on, and how can we stop Fooling Ourselves?

One of the most important results of this concern – in fact, I think this may be my most important contribution – was to come up with the idea of state specific sciences. This proposal was published in *Science* in 1972 (Tart, 1972). I'm still not quite sure why they published it with its revolutionary implications, but I suspect the editors didn't really understand it.

State specific sciences proposal

I was going through a body therapy quite popular in California at that time, known formally as Structural Integration or informally as Rolwing. Practitioners rearrange the connective tissue in your body through *deep* massage so you are lined up better under the influence of the gravitational field and – it's very painful. I don't like pain, for some strange reason, but the results of the therapy were good. I was having oh, my second or third session, experiencing an 'altered state of pain,' and suddenly ideas of integrating science and ASCs started bubbling up. By the time I had driven back to Davis from San Francisco, the entire structure of my proposal

for creating state specific sciences was clear in my mind, and within another week I had 200 copies of the formal proposal ready to pass out at a conference I had been scheduled to go to the following week! It was an amazing exposure to creativity. I wish everything would come like that! I was just amazed at how all these disparate thoughts came together into this integrated proposal.

The basic idea is that *any* state of consciousness, including our ordinary state, is a specialised one. There's no such thing as a 'natural' or unbiased state of consciousness. Every state is useful for some things, not so useful or inferior for other things. Accurate in this, biased in that. Useful for mobilising energy for this but not for that. Even in our ordinary state, we have *state specific perceptions*, we have *state specific logics*, etc. If we confuse the specialised with the universal, we are fooling ourselves. I asked myself, 'What's the *essential* aspect of science, before *scientism* says it's only the study of the physical world?

The essence of scientific method is four-fold. Starting with the fact that you are interested in something, (1) you give *data*, observation, direct experience the highest priority. You go out there and you observe as well as you can. Then (2) you 'figure out' *why* the observations are the way they are, you devise a *theory*. That's fine, you come up with theories that make some kind of logical sense of the data, and you specify the *logic* you are using – because it may be specific to the specific state of consciousness you're in. And then (3), the real beauty of science – the thing that I think makes it so powerful – is a recognition of what I like to call the *universal principal of rationalisation*. In retrospect, we can find a plausible seeming reason for any and every pattern of events – whether that reason actually has anything to do with the real factors affecting the data or not. We can *rationalise* anything, while thinking we're being *rational*. So essential science has this wonderful requirement that yes, you've figured it out. You have this insight, it feels

good, you believe (perhaps fervently!) that you understand. It makes sense. It's elegant, mathematical, whatever. Now *you must empirically test the actual usefulness of your beloved theory by making predictions about things you haven't seen yet.* Then take the step of going out and *testing* your predictions by gathering new data.

If my theory, for example, is that there is a universal, invisible force I call gravitation, that makes all objects fall toward the ground when released, and, when I let go of this thing (drops pen) it must fall, if I let it go and it doesn't fall, that's too bad for my theory.

This gravitation theory has been remarkable successful in accounting for all my (and others') observations of released objects to date, but I've seen some psychical research data that suggest other factors can intervene on rare occasions. But meanwhile it's such a good theory in terms of its predictions working out that we've taken to calling it the *Law of Gravity* instead of the *Theory of Gravity*. But the requirement of essential science is that a theory is *always* subject to further test. If it doesn't predict the outcomes of further tests, then the theory has got to be revised or thrown out altogether, no matter how attached you are to its obvious truth, beauty, elegance, etc.

I love that discipline of constantly going back to the data, to facts, to observations, to basic experience, to test your theory. It's our major, ultimate check against Fooling Ourselves.

And, to finish outlining essential scientific method, (4), you communicate with colleagues who can expand and check your observations, your theories, and your tests of your theories. Our colleagues help us with More and with preventing Fooling Ourselves. That's essential science.

My state specific sciences (SSS) proposal is basically that our ordinary state is not the only or the 'natural' state of consciousness. It is one particular way of organising the mind. We develop various fields of science in it. They work quite well in some areas and

inadequately in others. So let's expand our scope by looking at various ASCs. Can we practice essential science in them? Can we observe in a state specific fashion? Can we theorise with a state specific logic? Can we test the consequences our theories predict by whatever state specific logic is used within those states? Can we develop other, complementary sciences in various ASCs that will give us a full scale look at what's possible?

I think this proposal was premature, although it created a lot of excitement at the time. There were over a hundred letters to the editor in response to its publication in *Science*. I'm afraid most of us know that when we publish something, nobody ever says anything, one way or the other. So the SSS proposal brought up a lot of reactions. Most of the reactions were on the order of 'This is ridiculous! There's only one rational state of consciousness, ordinary consciousness. We're in it now. The idea of doing science in an altered state is crazy, as all altered states are pathological. Why did you waste space publishing this junk for?'

The other reactions were on the order of 'Yes, right. Let's get on with it.'

Interestingly, I could generally sort which of the two reaction patterns a person held by their age and position. Most of the older, established people (e.g. full Professors), said the SSS proposal was all nonsense and there's only one rational state. It was the younger folks who wanted to get on with looking at SSSs. The most interesting letter, which *Science* didn't receive until after they'd closed the correspondence (but they passed on all the letters to me), came from a psychiatrist who, comment-wise, was in the old, established people camp. Altered states are pathological. You can't do science in them. In a second letter he wrote a few days later, he said he was very embarrassed to have to write this letter but his scientific honesty compelled him to write it. He had been in an ASC the previous night and thought about this proposal for state specific sciences - and it made perfect sense!

Although my proposal for state specific sciences was premature at the time, I still think it's one of the best ideas I've had and something we very much need. Recently *Ciencia e Cultura: Journal of the Brazilian Association for the Advancement of Science*, devoted an issue to consciousness and asked me to write an updated version of this proposal for state specific sciences (Tart, 1998). This article is also available on my website (www.paradigm-sys.com/cttart/).

I think we actually have a couple of SSSs, or the beginnings of SSSs, existing now. One of them is mathematics. The kind of consciousness a lot of mathematicians get into when they are actually doing their work and coming up with their ideas is so different from my ordinary state of consciousness, that I can't understand it. Some mathematicians have told me that yes, for them it's a specific ASC. So, the idea of SSSs may have been demonstrated already. I think it also likely that we may establish an SSS for lucid dreaming. Lucid dreamers are starting to exchange observations of what happens, data, to come up with some theories about what can happen in lucid dreams or how they work, etc. There is a beginning of a state specific science there.

Tradition and discrimination

Now there's a very important question I think we have to ask ourselves here about transpersonal psychology. Much of what we're doing as transpersonal psychologists up to this point is mostly borrowing from various spiritual traditions, particularly those of the East. Are these traditions based on state specific sciences, or are they something else, perhaps (biased) *technologies* instead of sciences?

It's not the case that we have a lot of choice about borrowing from them, of course. We're too young as a field ourselves. We have to draw from there. I draw heavily from Buddhism and from Gurdjieff's ideas, for instance. Are these sciences, or something else? Am I getting just a fine method for systematic investigation and development of

the mind and its transpersonal aspects, and/or am I picking up a lot of built in biases from past cultures? I'm not sure.

To me, science is really a very idealistic vocation. Science to me is a spiritual quest, because you make a commitment to discover truth, *no matter what you would like things to be*. You make a commitment to constantly work to discover and abandon your biases, to put aside your own beliefs when they interfere. To try to get at the truth for its own sake, which to me is a very noble ideal.

I look at Buddhism, for example, from that perspective, and it's a lot like a science in some ways, such as the Buddha admonishing his followers not to accept any ideas on the basis of authority but to test them for themselves – but the goal is enlightenment. The goal is salvation, and so when I interact with some of my Buddhist friends or read some Buddhist text sometimes, I think there is not a general question being asked of what is real. It is more a question of what do I need to know and develop that will end my suffering by becoming enlightened.

I'm overgeneralising here to raise a point, but it's a point that we must eventually consider. I don't have time to go into this in a sophisticated sort of way, but I think we have a lot of *state specific technology* around. Technology in the sense that the 'big picture' of how the world is has been accepted. The goal has been accepted and people work in altered states within that big picture/belief system to accomplish desirable things, but they may not be asking totally open-ended questions like a real science does. So one of the things that we'll have to do as transpersonal psychologists is eventually start refining what we have taken, in that it is a technology – and it might not be true for our modern times or in any general sense – and what is really something we can verify as a truth irregardless of what we would like truth to be.

As you know, I teach part-time at the Institute of Transpersonal Psychology and I usually meet many of the incoming first-year

students – they often take my classes. When I welcome them as new students, I frequently say, ‘We’re going to teach you all sorts of wonderful, profound, spiritual, transpersonal material here at ITP. And incidentally, about 50 per cent of what we teach you is ‘unicorn dung.’ (Unicorn dung is the transpersonal version of bull dung.) And we, the faculty, don’t know which 50 per cent is which.’

I try to let the students know that we’ve borrowed enormously from various spiritual traditions. We had to in order get to get our field started, but we don’t know what’s universally valid or what may be only valid for some people under certain conditions, etc. But I try to make this positive by saying, ‘You have an opportunity in your dissertation research to do some refinement, to start separating the wheat from the chaff, the gems from the unicorn dung, and that’s really important.’

Well, I’ve gone on longer than I should for the time allotted here, so I’m going to skip most of the rest of my career and just jump up to the present, because in a talk like this you should reach some sort of conclusion. But, I can’t reach a conclusion – I’m not done! I’m still going back and forth between that More dimension and that Fooling Ourselves dimension. I’m still seeing ways in which we can be so much more than we ordinarily think of ourselves. Ways we can develop new abilities and potentials. And I see more and more ingenious ways in which we can fool ourselves.

In the East, Hindus and Buddhists have the concept of living in illusion, living in *maya* or *samsara*. This is a strange concept to Westerners – although perhaps not to transpersonal psychologists. What really amazes me is that just drawing from the work of mainstream psychologists I think we have more understanding about the nuts and bolts, the actual *mechanism*, of living in *samsara*, in a semi-arbitrary constructed reality that is seriously in variance with our true nature and the true nature of the world,

than they probably do in the East. But we don’t put all this detailed but fragmented knowledge together to arrive at the idea of living in illusion.

So, as I said, I’m still going, still researching, still learning, still looking. I’ll just mention two or three things that I’m doing now and then bring this talk to an end.

Current – emotions as ASCs

One of the things I’m looking at is emotions as ASCs. It has become clear to me that within the organisational framework of our ordinary state (Tart, 1975) we can have mild intensity emotions – and nothing else changes importantly. I can be a little sad, or a little angry or a little jealous, for example, and my name and personal interests are still the same, my values are still the same, the overall organisation and functioning of my consciousness stays in the system configuration we call ordinary consciousness. But there’s a threshold in the level of emotion. When an emotion rises above a certain threshold, it amounts to an induction procedure (Tart, 1975), and consciousness is reorganized into an altered state. Rage, for example, is qualitatively different than just taking a little bit of anger and making it bigger and bigger. Other aspects of conscious functioning and the overall pattern of functioning change. Our perception changes, for example, as well as our style of thinking, our logic.

Consider being in a state of rage, again. The *obvious* and *logical* way to solve my problems is to kill the person who is bugging me! That’s the logic of that particular state, what is ‘logical’ has changed. Luckily I don’t get completely into that particular state and act on that sort of thing. As another example; if I’m depressed, my troubles obviously will go on for eternity, the way time perception is constructed has changed. I’m just starting to explore emotional states as ASCs, states which, like all ASCs, are useful for some things and create problems for other things.

Current – teaching mindfulness in an academic setting

A second major interest of mine now is my teaching at the Institute of Transpersonal Psychology. One of the courses I teach, which is very different from anything I've taught in mainstream academic settings, is a course on mindfulness in everyday life. I draw inspiration for this from the little bits I've learned from Buddhism and from Gurdjieff's techniques for bringing mindfulness into everyday life. It's fascinating to see my students begin to apply this and become more present, more sensitive, more intelligent in parts of their everyday life. It's particularly fascinating to see that it works to a fair degree in this setting, because at ITP the students are being offered so many wonderful spiritual/transpersonal ideas. Such a feast of wonderful *ideas* to take you totally into your head and off into fantasy land – and yet the students are able to practically learn something about coming into the moment, coming into their bodies, being present for more accurate perception of what's really there in the here-and-now. It's very gratifying to see this kind of teaching working like that.

Current – the archives of scientists' transcendent experiences

Finally one other project that's my main focus at this time, and hopefully will be operative within a month or two of this talk³. Over the years I've met a lot of scientists, from a wide variety of disciplines, who, after they realise it's safe to talk to me, have told me about a psychic or spiritual or transpersonal experience they've had, but never revealed to anyone else. Why don't they talk about them? There's a stereotype that intelligent and 'normal' people, especially 'real scientists' don't have such impossible and pathological experiences, and a realistic fear of rejection by other scientists if they do talk about them.

So the project I'm starting is The Archives of Scientists' Transcendent Experiences (TASTE) (<http://psychology.ucdavis.edu/tart/taste/> or www.issc-taste.org), a website where scientists – and I'm sticking with scientists for the snob value, frankly – and also for the fact that they are good observers – can anonymously post their transcendent experiences. By letting them post them, I believe it will help them process them, it will eliminate a block to growth. We know that if you suppress and deny vital experiences, you stop your own personal growth.

Secondly, as these experiences accumulate, it will help to dispel the stereotype that 'real scientists' don't have spiritual experiences, because anyone will be able to read this web site, even though I'm going to restrict the experiences posted to those from scientists. And third, it's going to provide, of course, a very interesting body of research data. Scientists are trained to try to observe accurately, and I suspect I'm going to end up with thousands of experiences. Indeed, I'm actually kind of afraid of that! Part of me is saying maybe I'll freeze this website, make it read only after the first several hundred experiences because I might not have enough time to do the editing to put these in proper form, verify that they actually come from scientists and the like, it's going to be a big drain on my time. Hopefully I'll be able to find some grant money to have an assistant. So, if any of you know of a source of 10 or 20,000 dollars or something like that, so I could get a research assistant to help me in this, let me know, as I think collecting and disseminating these transcendent experiences is very important. I think it's *so* important to do anything that helps to bridge the gap between science and spirituality! As I mentioned earlier, to me, true science, essential science, can be a spiritual quest, and it does not have to be in conflict with true spirituality, which involves a humility and openness to what's greater than us.

³The Archives of Scientists' Transcendent Experiences (TASTE) (<http://psychology.ucdavis.edu/tart/taste/> or www.issc-taste.org) site is now operating, and receiving, as of January 2000, about 1000 visits a week.

Bridging – The third dimension

Scientism, dogmatic science, dogmatic religion or dogmatic spirituality – of course there is going to be lots of conflict, because people are insecure and not open. People in each camp are going to be threatened by anything anybody else knows. We've got to get beyond that. I've tried, in my career, to start building bridges between open spirituality and open science. I've seen that they can be built. I think both sides can be improved by it. In transpersonal psychology, for instance, we need to apply scientific methods to objectively test what particular spiritual training methods work for what particular kinds of people. We can't just draw from

traditions without getting lots of, to use my earlier metaphor, unicorn dung along with the vital essence.

So, I've talked about the dynamics of the More dimension and the Fooling Ourselves dimension, but perhaps the third underlying dynamic dimension which, in retrospect, I think has run all through my career is building bridges between science and spirituality. Many bridges! I'm hoping that we'll all move on in building these bridges, and that when we meet again in some future year, we will have made great progress in our mutual endeavours!

Thank you.