

ALTERED STATES OF CONSCIOUSNESS: A THIRTY-YEAR PERSPECTIVE (An Invited Address for Division 30) Part 1

Charles T. Tart, Ph.D., University of California, Davis
(cttart@ucdavis.edu;
www.paradigm-sys.com/cttart)

(Dr. Tart, arguably the most important figure in the study of altered states of consciousness of the last decades, agreed to give an invited address to our division and to make available his notes for that presentation. In the early part of his career, he was very much involved in doing creative and systematic research on hypnosis, being a collaborator of Ernest Hilgard's lab at one point. I was fortunate to be his doctoral student and hope that the Bulletin readers will appreciate his mind, heart and wit in the following lines. His presentation will be continued in the next number of the Bulletin.)

It's a real privilege to have been invited to speak to you today. Hypnosis research is where I actively started my career as a psychologist, and it stays a major knowledge base informing my broader work.

A lot has changed since I was active in hypnosis research years ago, and a lot of things are still the same. This is true for

psychology in general also. About five years ago, for instance, I taught Introductory Psychology for the first time. I wondered what had changed in the 35+ years since I had taken it as an undergraduate. I reviewed a lot of potential textbooks, and discovered two major new things, while everything else seemed fairly familiar. One of these was the babies were a lot smarter! This was not too much of revelation to those of us who were parents, of course, but it seemed to be something new in psychology. The other thing, which was especially gratifying to me, was that practically every book either had a full chapter or at least a major section dealing with altered states of consciousness. There was nothing like that when I first began in psychology.

I've been asked to talk to you today because my work has helped promote research on altered states of consciousness (ASCs). I suppose the main event was the 1969 publication of my *Altered States of Consciousness* book. This became a textbook that allowed many courses to form, which had not been possible before. I've con-

tinued working on various aspects of altered states throughout my career. The best thing to do today would be to give a highly focused talk, giving you the essence of what we've learned about altered states in 30 years, but that's obviously impossible in 45 minutes, so I will simply highlight some aspects of my work.

I'm usually very serious in my talks. I have data to present, or methodological points to make. Today, though, I am going to be more of a storyteller than a methodologist, I'll try to amuse, as well as educate, but the methodologist is always there in me. I also think this talk will be relevant to many of you because I have honestly pursued what I thought was important throughout my career, rather than what was fashionable or what garnered easy grant support. I won't mention the political crap this has led to, as academic freedom was not always upheld - you all know about that kind of thing. But as I get older, I think more and more about science as being a noble calling, rather than just a job, and hope I've been able to follow that aspiration in my own career.

There have been two major dynamic themes infusing my career. One of these is what we might call the MORE dimension or theme. We have narrow concepts about who we are and what our possibilities are, which create needless suffering. The "empty organism" of behaviorism, for example, devalued the best of human nature and left many important things out. If you took a behaviorist approach back when I was in graduate school, for example, a drug like LSD would have to be classed as a "tranquilizer," since people who took it tended to sit still and do nothing. This was so silly! Further, there was a strong tendency for unusual experiences to be pathologized, and so it has been important for me to emphasize the MORE dimension.

The second major theme is that we are experts at FOOLING OURSELVES. Fooling ourselves by ignoring and rejecting the MORE, fooling ourselves by bias, by the false creation of *apparent* realities that put us out of touch with *actual* reality. There's been a constant dynamic between openness and caution, between the MORE and the FOOLING OURSELVES dimensions in my career. I'll use these two dimensions as a road map of the forest as we look at some of the trees.

The Mind of an ASC Investigator:

First let me say a little about the expectations you probably have of someone who has investigated ASCs throughout his career. I imagine some of you think that I have a quite wild consciousness, with all sorts of unusual experiences all the time! The reality is not like this at all. My friends consider me quite stable, pragmatic, and sensible. I'm relatively un hypnotizable. I tried some meditation practices early in my career, with essentially no success at them. If anything, I'm over-stabilized, it's too difficult to change my state of consciousness.

At times I wish I weren't so over-stabilized. I think it's important to have some direct experiential knowledge of various altered states if you want to study them, so I do try to experience various ASCs when possible. This of course introduces a question. Would it be better to be "ignorant," by being distant from my subject matter, or to be "biased" through personal experience?

Does Experienced = Biased?

There's an illuminating story here from the early days of research into psychedelic drugs. Two psychiatrists wanted to investigate the effects such drugs had, but there was already considerable controversy in the field. A major school of

thought said that anyone who had taken a psychedelic drug probably had some sort of permanent brain damage, since the drugs seriously interfered with rational functioning, so any research they did would be fatally biased. The other school of thought said that so many of the most important effects of psychedelics could only be known directly. Thus, the research of those who had not had the experience was bound to be incredibly shallow and almost meaningless. What were they to do?

The two psychiatrists decided to try to get the best of both worlds. One of them would take a psychedelic drug and so have some direct knowledge of the experience, the other wouldn't, and then by working as a team on their research projects they could supposedly compensate for each other's ignorance and bias. So they flipped a coin and proceeded.

When I tell this story, often someone asks me whether the "winner" or the "loser" got to take the LSD, but I don't know that detail!

I have had some changes in my capacity for experiencing ASCs later in life, as we'll see, but basically I remain a very pragmatic, practical and stable person.

Initial Research on Hypnosis and Dreams:

My work on the ASC of hypnosis began in the early 1960's. I received my Ph.D. from the University of North Carolina at Chapel Hill in 1963. The MORE theme was prominent in that. In my thesis and dissertation research, I showed that you could use posthypnotic suggestion to influence the stage 1 EEG (brain wave state)-REM (Rapid Eye Movements) dreaming process of the night. I found I could strongly affect the content of nocturnal dreams, almost specify exactly what a person would dream about. I also found that I could push some basic parameters of the physiological stage 1-REM dreaming process about plus or minus 10% by posthypnotic suggestion, such as making a person's stage 1-REM periods be 10 % longer or shorter.

I also had some strong introduction to the FOOLING OURSELVES dimension in graduate school. In preparing for my research, I'd read extensively in the scientific and scholarly literature on dreams, and discovered a book by a British philosopher who conclusively and logically proved that nocturnal dreams didn't actually exist! I was so disturbed by this that I had bad dreams about it all night long! This was a good demonstration that logic has its uses, but data, reality come first!

Fortunately for me and many other psychologists who wanted to do dream research, Eugene Aserinsky and Nathaniel Kleitman had shown a few years before that there were physiological correlates of nocturnal dreaming. We psychologists tend to have an inferiority complex, to think that the work we do is somehow less real or scientific than that of the physical sciences, so, politically, we needed this physiological justification. This "physics envy" is a silly thing that we psychologists do far too much of, and that I have encountered again and again in my career.

During the same years in graduate school there was a big, if transient, change in my internal experiences of altered states. I've mentioned above that I have been pretty unresponsive to altered state induction procedures. To illustrate what happened to me, let me tell you the story of the thousand dollar mule.

The Thousand Dollar Mule:

Back in the days when a thousand dollars was a lot of real money, a Missouri farmer heard of some wonderfully productive, but highly expensive mules another farmer had for sale. They cost a thousand dollars each, which was an awful lot of money! But the farmer really needed a good mule, and in spite of his inherent stingi-

ness made himself part with the money.

He took his wonderful new mule back to his farm, hooked him up to a plow, said "Giddy Up," and nothing happened. Indeed, this supposedly wonderful mule did not do anything useful!

The farmer was convinced he had been cheated and took the mule back to the seller, demanding his money back since the mule did not have the wonderful qualities ascribed to him. The seller insisted, however, that the mule was indeed wonderful, but eventually mentioned that the mule needed some training, which would cost another thousand dollars!

The farmer was furious at the thought of parting with more money, but he had no choice and so eventually paid up. The seller then said that he would start training the mule right away and walked off into the barn. He came back with a 2 x 4 piece of wood and suddenly whacked the mule with it! "What are you doing to my thousand dollar mule!" shouted the worried farmer. "I'm beginning to train it," said the seller, "but to start training this mule you first have to get its attention."

During graduate school, I found my 2 x 4 by being a research participant with a psychiatrist in the Medical School, Martin Keeler, who was doing research with LSD and psilocy-

bin. I was a volunteer on quite a few occasions. Indeed, I took the full length Minnesota Multiphasic Personality Inventory, all 400+ questions, on many occasions while at the peak of the altered states, which I think I deserve some sort of medal for! Well, I've always been devoted to science...

This 2 x 4 really opened the MORE dimension for me. Psychological realities which had been just concepts, which I previously had no real understanding of, became data; things like dissociation, synesthesia, and suggestibility.

Participating in these psychedelic drug experiments also further educated me on the FOOLING OURSELVES dimension. As part of the psychological testing in these experiments, at some point each participant had to fill out a symptom checklist. This consisted of a bunch of 3x5 index cards, each with a single effect written on them. You read the card and then you put it in a box marked "true" or "false." I quickly discovered, however, that because of the enhanced suggestibility created by the ASC I was in, the "testing" procedure was actually an induction procedure. If I read a card that said, for example, "My palms are sweating green sweat," I would think "That sounds interesting," read it again two or three times, then looked down on my palms and saw that they

were indeed sweating green sweat! So I would toss it in the true box. On the other hand, if I read something like "I am feeling anxious." I would immediately toss it in the false box before it had a chance to become true. So what was thought of as straightforward testing actually enabled us to fool ourselves by introducing biases in the process. So, these experiences with psychedelics were the 2 x 4 that got my attention!

Given the controversy about who could be objective, clearly I'm biased as a result of having had some direct experience. On the other hand, because I know I'm biased, I've made a point of assuming I'm biased in many ways throughout my career, and so I try to discover and compensate for my biases, which I think is a better position to be in than assuming you're not biased when you probably are.

Protecting My Tender Sensibilities:

After completing my doctoral work at UNC, I was preparing to take a postdoctoral fellowship with Gardner Murphy at the Menninger Foundation. My UNC advisers were horrified! Although Gardner Murphy was quite respectable in many ways, having served as president of the APA, for example, he was also a "wild man" by the standards of the time. He had actually written a book on Asian psychologies, claiming

that we Westerners had something to learn about psychology from people in other cultures! Fearful that an impressionable young man like me would pick up too many strange ideas from Gardner Murphy, my advisers got me another postdoctoral fellowship, and so sent me to Stanford in California at the height of the psychedelic revolution!

The two years I spent at Stanford with Ernest Hilgard were quite wonderful years. Hilgard was a wonderful role model for me, for not only was he a leader in hypnosis research, he was also a gentleman and a scholar.

Experimenter Bias:

One of the first experiments I was involved in under Hilgard's tutelage greatly sensitized me to the FOOLING OURSELVES dimension. There was considerable controversy at that time, the early 1960's, as there is now, over whether hypnosis was actually an ASC or just ordinary consciousness with enhanced suggestibility. The entire laboratory was involved in a straightforward experiment to test this. A volunteer would come in and be randomly assigned to an experimental or a control group. In the experimental group, the volunteer was read a standardized hypnotic induction procedure, and then read a standardized suggestibility test, one of the Stanford

Hypnotic Susceptibility Scales. In the control group the participant just chatted with the experimenter for a while, without the experimenter reading the formal induction procedure, and then the experimenter read out the same suggestibility test procedure. If hypnosis made a difference, we would expect to see differences in the two groups' suggestibility scores.

After I had run my first few volunteers, I was bothered. I always spend a lot of time observing the processes in my own mind and behavior, and I had noticed that I seemed to be giving the suggestibility test part of the experiment differently, depending on whether I had given a hypnotic induction procedure first or not. If I had, there was something more "smooth," or "hypnotic" about the tone of my voice. Now, obviously if I wasn't giving the test in the same way, I was completely confounding the experiment. If other experimenters were making the same mistake I was, the entire experiment was ruined.

I brought up this issue at a laboratory staff meeting shortly thereafter, talked about experiments by Rosenthal on experimenter bias, and emphasized how important this issue was. To put it simply, nobody paid much attention to me. All the other

experimenters were psychologists, were certain they were giving standardized tests in this standardized way and being objective about things, so there was no problem.

I am stubborn, though, and suspected it was not just me. So I got everyone to agree that I could put microphones in the laboratory rooms and tape record the reading of the standardized suggestibility tests. I did so and then gave pairs of readings, one following a hypnotic induction procedure and one a control procedure, to judges blind as to which was which, and asked them to try distinguish. The judges were quite good at distinguishing the two sessions.

What especially struck me about this finding was that this bias existed in experimenters who were professionals, who knew about the importance of bias, who knew they were being tested for bias, and nevertheless still believed that they weren't showing any. If bias could happen under these conditions, how much more rampant could it be when experimenters did not even think about being biased or not?

The entire experiment had to be done over again, of course, using tape-recorded

suggestibility tests so they would indeed be given exactly the same way. And yes, the group who went through the hypnotic conduction procedure did show greater suggestibility; not that this study or subsequent experiments has finally put to rest the question as to whether hypnosis is an altered state or not!

Notice I did not say the "hypnotized" group showed more suggestibility, only "the group that went through the hypnotic induction procedure." One of the methodological flaws I have seen over and over again in much psychological work is equating the presence of an induction procedure with the presence of an altered state. I don't know how we can do this. Certainly it is very "objective" to know whether an induction procedure has been given or not, but whether a participant responds and actually goes into an ASC is an entirely different question! This kind of methodological problem is still very much with us.

The Influence of California:

While doing my postdoctoral fellowship at Stanford (1963-65), the California culture of the time began working heavily on me and opening up the MORE dimension. For example, I spent time in a growth community called

Bridge Mountain, where such things as massage, various kinds of body-work, emotional sensitivity, and creativity were taught. I, who had been and am still quite an intellectual, learned a great deal first-hand about the importance of being embodied, about how the body has a kind of intelligence of its own if we pay attention to it.

The humanistic and transpersonal training I got at Bridge Mountain, Esalen Institute, and other places had an illustrative (and somewhat amusing) consequence several years later, when I was teaching at the University of California at Davis. A colleague, Joseph Lyons, and I had decided we should be teaching a course in humanistic psychology. Our colleagues in the psychology department were very ambivalent about allowing us to teach such a course. They had heard about humanistic psychology: students had experiences and emotions right there in the classroom! They were not all sure there was any place for experience and emotions in the classroom! They finally agreed to let us offer the course, but only on the condition that at the beginning of each course we announced to the students that while we might offer some exercises which might lead to experiences, no student was required to have any experiences what-

soever in the classroom and this would not affect their course grade in any way!

Broadening Out From Hypnosis Research:

Beginning with my thesis and dissertation work, through my postdoctoral fellowship with Ernest Hilgard, and for several years at UC Davis I was heavily involved in hypnosis research, but in the late 1960's my focus broadened to altered states of consciousness in general. I saw a choice before me: I could get more and more involved in one specialized ASC, hypnosis, or I could try to grasp the whole picture of these rich alterations in consciousness. Although I have now pretty much left active hypnosis research, I'm quite proud that two of my former UC Davis graduate students, Etzel Cardeña and Helen Crawford, are now leaders in the field of hypnosis research!

1969 saw the publication of my *Altered States of Consciousness* book. As I mentioned at the beginning of this talk, many courses were started as a result. There was a lot of scientific literature on ASCs around, but it was scattered in such diverse places that no one ever saw enough of it to make much of an impression. My *Altered States* anthology brought this material together and formed a core around which courses could

form and further research could go on.

My *Altered States Of Consciousness* book stayed in print for more than 15 years (and is still available by mail order, via my web site www.paradigm-sys.com/cttarrt/, even though officially out of print) and, with ambivalence, I can say it is still one of the best books on the subject available today. I still use it as a text when I teach courses on ASCs. I say this with ambivalence, because I had hoped that so much research on altered states would be stimulated that the book would be totally outmoded within a decade. While there has been a fair amount of research on a few ASCs, in most areas there's been too little done, however, so the book remains one of the leading books in the area, in my (undoubtedly biased!) opinion.

One of the ways in which my focus broadened from hypnosis research to ASCs in general actually can be traced to some investigations of hypnosis. In the late 1960's, I was doing extensive research on using posthypnotic suggestions to influence nocturnal dreaming at UC Davis and had a group of highly talented and trained hypnotic volunteers. I decided it would be interesting to explore really deep hypnotic states with them, the

Continued, Page 24

"Ethics", Continued

tise, including but not limited to hypnosis, biofeedback, and projective techniques, to individuals who lack the pre-requisite training, legal scope of practice, or expertise.

In summary, Division 30 does not have a code of ethics, nor a means of sanctioning members who commit ethical violations in the use of hypnosis. However SCEH and ASCH do have specific guidelines, the essentials of which can be extrapolated to meet most of the APA ethical guidelines. Currently, we are interested in determining whether the APA Code of Ethics does a sufficient job of addressing the issue of the lay hypnotist. The Ethical Committee will welcome any suggestions for this, or any other ethical issues pertaining to hypnosis (send your suggestions to the bulletin's editor).

Ψ

Van der Kolk, B.A., & Van der Hart, O. (1989). Pierre Janet and the breakdown of adaptation in psychological trauma. *American Journal of Psychiatry*, 146, 1530-1540.

Van der Kolk, B.A., & Van der Hart, O. (1991). The intrusive past: The flexibility of memory and the engraving of trauma. *American Imago*, 48, 425-454.

Ψ

Call for papers for the next APA meeting:

The American Psychological Association will hold its 1999 Annual Conference August 20-24 in Boston, Massachusetts. APA Division 30, Psychological Hypnosis, is calling for presentations and symposia relevant to the science and practice of hypnosis. Complete information regarding submission criteria are available in the September issues of the APA Monitor and the American Psychologist, and the APA website (www.apa.org). **Complete conference proposals must be received by December 2, 1998 for consideration.**

Nominations for Division Officers:

For the next election, there will be three vacancies requiring a membership vote: President, APA Council Representative, and Member-at-Large. The latter position assumes new importance because this position now takes on a public relations duties; APA will be asked to send requests for information to our members-at-large. The APA Council Representative helps to make APA policy, and it is important that he or she be articulate and well-informed about current issues such as health care. Send your nominations no later than November 30th to:

Stanley Krippner, Ph.D., Saybrook Graduate School, 450 Pacific Ave., 3rd floor, San Francisco, CA 94133

"Abstracts", Continued

of hypnotic ability in somatoform disorders. This study also found, as predicted by the HRMTP, that patients with psychophysiological insomnia are likely to score highly on a measure of neuroticism, or negative affectivity. The numbers of patients in the low, moderate, and high score ranges of neuroticism for the insomnia patients were 0, 4, and 13 respectively.

Ψ

"Consciousness", Continued

kind of states you seem to read about in very old literature but which no one seems to work with today. Some of the ASCs my volunteers got into sounded much more like "mystical states" or "meditative states," the MORE I've talked about, than the states we usually associate with hypnosis. (I use quotes around mystical and meditative here as a brief methodological reminder of the imprecision of these terms, but they are good enough for my brief highlights today.) In one case, for example, the participant talked about his personal identity becoming "potential" rather than being anything in particular, about space and time becoming categories which were too limited to adequately describe his experience.

(To be continued in the next issue...)