ACCESSING STATE-SPECIFIC TRANSPERSONAL KNOWLEDGE: INDUCING ALTERED STATES

Charles T. Tart, Ph.D.[1]
Palo Alto, California

ABSTRACT: Various esoteric spiritual systems have cognitive, emotional and action bases that are only fully accessible in appropriate altered states of consciousness. These are types of state-specific knowledge. This paper draws on the author's systems approach to understanding states of consciousness to elucidate general principles in inducing altered states in the hope that they will be useful in understanding both commonalities and dynamics of various esoteric development systems, as well as enhancing practical approaches to accessing state-specific transpersonal knowledge.

In the Spring of 2007 I was invited to attend an invitational conference sponsored by the Esalen Center for Theory and Research on a renaissance of scholarly interest in Western esoteric systems. I was pleased to see that much forgotten (and possibly repressed) spiritual knowledge was being seriously looked at again in a scholarly way, and saw that much interaction and mutual enrichment with transpersonal psychology and the study of the nature of consciousness may eventually result from this. At the same time it was clear to me that a scholarly approach carried out only in "normal" Western consciousness, while valuable, was bound to miss some of the most important parts of the spiritual/transpersonal knowledge being studied; for the heart of most, if not all, spiritual systems is state-specific knowledge–knowledge that is only fully accessible in appropriate altered states of consciousness (ASCs). The present paper, based on my contribution to the conference, focuses on aspects of the induction of ASCs, since they are essential to full understanding, and should be of interest to transpersonal psychologists in general as well as students and scholars of esoteric practices. Looking at general principles of ASC induction can allow commonalities (as well as important differences) in various spiritual practices to be seen in what otherwise would appear to be wildly differing approaches.

I will not attempt in-depth scholarship here (details of this systems approach can be found elsewhere, see Tart, 1975), as it would result in much too large a paper, but let the ultimate usefulness of the approach be judged by its long-term results in aiding understanding of various esoteric practices.

To start with the concrete before moving to more abstract principles…

E-mail: cttart@ucdavis.edu

The Monk, The Alchemist, The Shaman

Just before writing my conference paper, I watched a video about Tibet, in which I was constantly seeing monks and lamas twirling their handheld prayer wheels–around and around and around–which reminded me of mediaeval alchemists stirring and stirring and stirring various preparations, concentrating, making circular motions, for hours and hours, like the monks and lamas–around and around and around–which reminded me of a demonstration I sometimes gave to students in my ASC classes at UC Davis and ITP.

I would tell them to watch carefully, I was going to demonstrate a powerful technique for inducing an ASC. Then I would step to the blackboard and slowly draw a large circle, then draw a same size circle over it, and over it, again and again, around and around and around. After allowing a minute or so of this for the students to become puzzled - what's so special about drawing a circle over and over? - I would tell them that while this looked meaningless or silly to us, people with a modern, Western cultural background, if they were Eskimo shamans they would realize this was a classical technique for entering the spirit world, for, in our terms, inducing an ASC.

We will look at these examples again at the end of this paper from the theoretical perspective developed.

States of Consciousness

The following is a revised and updated version of the induction chapter of a book presenting my systems approach to understanding states of consciousness (SoCs)(Tart, 1975), an approach developed from both my psychological training and my earlier work as a radio engineer. The latter was an important influence, as it familiarized me in dealing with complex *systems*, rather than being overly affected by the lure of what Gunther Stent (1972) called *premature parsimony*, a common cognitive pathology in science where the desire to create a simple and elegant explanation for things results in ignoring important aspects of the actual phenomena. Although consciousness research has now become relatively respectable in contemporary psychology and neurology, the lure of premature parsimony is as strong as ever, and the field is rife with oversimplifications. What I will briefly share with you here is somewhat complex, but, I believe, more adequate to the actual phenomenology of ASCs than other approaches of which I am aware. I regret that I cannot cite much in the way of recent references that expand this original work, as almost nothing has been done with this kind of systems approach other than my continued refinement of it.

I shall have to move lightly over many aspects of my systems approach in order to focus on induction, but full details are available in the original work (Tart, 1975).

We begin with the concept of a *discrete state of consciousness* (d-SoC), a relatively stable gestalt of the various functions or subsystems of consciousness,

a state that, from an experiential perspective, has a certain "feel" to it. If I asked you right now, dear reader, "Are you in your ordinary state of consciousness (SoC)?" Or, "Are you drunk?" Or "Are you dreaming?" I doubt that any of you would have difficulty in immediately recognizing your ongoing gestalt of experience as what you call your ordinary state. Your ordinary state is a d-SoC, as are being drunk or dreaming at night. The adjective "discrete" is added in my systems approach to recognize that, for most of us, most of the time, each such state is *discretely* different from the other. It is not a matter of continuity whereby, e.g., if you have N units of whatever consciousness is, then increasing it to 2N makes you drunk and increasing it to 3N makes you dreaming, or you might have 2½N and so you are in that kind of "state." Each d-SoC has its own unique organization, gestalt, pattern, and there is a transition procedure and transition period to get from one to the other. You have to drink a lot to get drunk (ignore slightly tipsy states for now), you have to go to sleep to begin dreaming.

[For simplicity of reading I will write "state" or SoC and "altered state" or ASC when I mean d-SoC or d-ASC, but understand that in reading other authors there is great variation in what people mean by "state" of consciousness and their usage may not be consistent with what I write here.]

A *state of consciousness*, then, is a system that has a certain coherent gestalt "feel" to it, a recognizable pattern like "ordinary" or "drunk" or "dreaming." Importantly, states that last long enough for us to ordinarily recognize and work with them are *stabilized* in multiple ways, so as to maintain their integrity in the face of changing environmental inputs and changing actions taken in response to the environment[2]. Any system has emergent properties important to study in themselves, but may also be usefully analyzed into subsystems or functions, especially since changes in these subsystems or functions may be important in inducing an ASC. Figure 1 shows the principal psychological subsystems[3] with which I have worked, also showing principal information flow routes, to give the overall flavor of a state of consciousness as a system. Details are not important for our purposes in this article.

Figure 1 is a static diagram, of course, and what is really needed is an animated, dynamic diagram showing changes within the subsystems and in the information flows between the subsystems, but all the while maintaining a recognizable "shape," the overall gestalt of a particular state. Our ordinary state, for example, is not just there, is not a static entity, but is a constant pattern of activity, a flow of energies and mental contents. We are very *busy* being in our ordinary state, it is a lot of work–but we are so used to doing this work that we normally never notice it.

Suppose that the coping function of a particular state is not appropriate for the existing environmental situation: you can not understand important aspects of the situation in terms of your current state, or do what is needed, given the resources of your current state. Some ASC might be more useful. Or suppose that your environment is safe and stable, no particular action in any state is

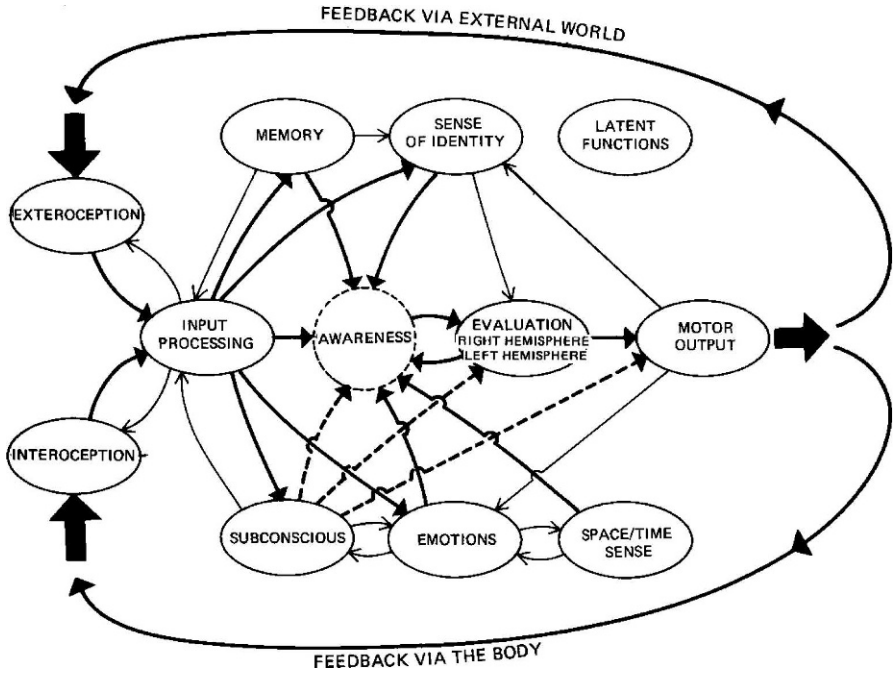

Figure 1. Basic subsystems and principal information flow routes in the systems approach to states of consciousness.

needed to cope with it, and you want to explore the mind by transitioning to an ASC: what do you do?

We will look at the process of inducing an ASC in general from my systems approach, and then illustrate its application to two transitions from ordinary consciousness: to sleep and to hypnosis, finally returning to our Tibetan monk, our shaman, and our alchemist.

Inducing an ASC: General Principles

The starting point is some baseline state of consciousness (b-SoC): for simplicity, we will take this to be our ordinary state, although we could use any discrete state as a baseline to measure change against.

As briefly noted above, our ordinary state is an active, stable, overall patterning of psychological functions which, via multiple stabilization relationships[4] among its constituent parts, maintains its identity in spite of environmental changes. I emphasize multiple stabilization, for as in any well-engineered, complex system, there are usually many processes maintaining a state of consciousness: it would be too vulnerable to non-adaptive disruption if there were only a few. A person who goes into an ASC at the drop of a hat is not likely to survive, since our ordinary state is the optimal one for coping with so many life situations.

Inducing the transition to an ASC is a three-step process, based on two psychological and/or physiological operations, *disruption* and *patterning*. The process is what happens internally; the operations are the particular things you do to yourself, or someone or something does to you, to make the induction process happen. In the following pages the steps of the process are described sequentially and the operations are described sequentially, but note that the same action may sometimes function as both kinds of induction operation, disruption and patterning, simultaneously.

Induction Operations: Disruption and Patterning

The first induction operation is to disrupt the stabilization of your baseline state, your ordinary state, to interfere with the loading, positive and negative feedback, and limiting processes/structures that keep your psychological structures operating within their ordinary range. Because ordinary consciousness is generally a well-engineered, multiply stabilized process, several stabilization processes must be disrupted. If, for example, someone were to clap his hands loudly right now, while you are reading, you would be startled. Your level of activation would be increased; you might even jump a little. I doubt, however, that you would enter an ASC. Throwing a totally unexpected and intense stimulus into your mind could cause a momentary shift within the pattern of your ordinary state, but usually not a transition to an ASC.

By analogy, you could probably go out and loosen one or several bolts–they are stabilization devices–at random on your car engine, but your car would still run. It is held together, stabilized, with many bolts, not just one or two.

So the first operation in inducing an ASC is to disrupt enough stabilization processes to a great enough extent that the baseline pattern of consciousness cannot maintain its integrity. You have to take out enough critical bolts, as it were, so the engine will not run; your car is no longer in "running automobile" state. If only some of the stabilization processes are disrupted, the remaining undisrupted ones may be sufficient to hold the system together; *thus an induction procedure can be carried out without actually inducing an ASC*[5].

Stabilization processes can be disrupted directly when they can be identified, or indirectly by pushing some other psychological subsystems/functions to and beyond their limits of functioning. Particular subsystems, for example, can be disrupted by overloading them with stimuli, depriving them of stimuli, or giving them anomalous stimuli that cannot be processed in habitual ways. The functioning of a subsystem can also be disrupted by withdrawing attention/awareness energy or other psychological energy from it, a gentle kind of disruption. If the operation of one subsystem is disrupted, it may alter the operation of a second subsystem via interactive feedback paths, etc.

Psychoactive drugs can also disrupt the functioning of the baseline state, as can any intense physiological procedure, such as exhaustion or exercise.

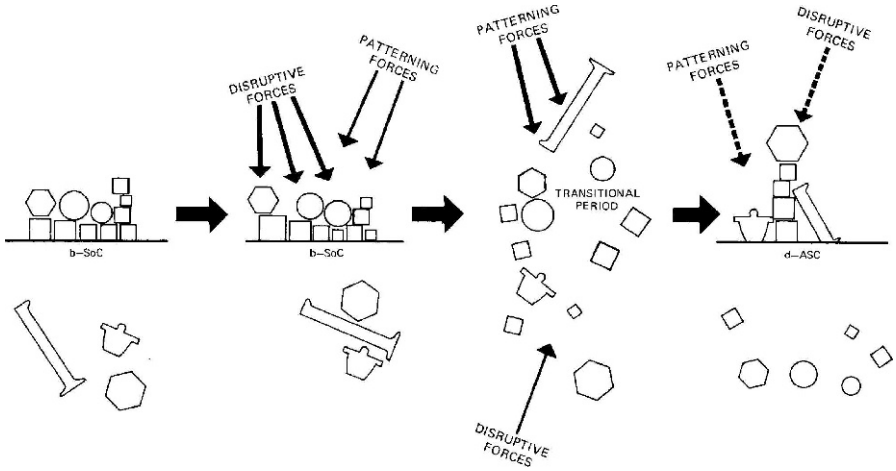

Figure 2. Steps in the induction of an altered state.

The second induction operation is to apply *patterning forces*, stimuli that then "push" or "pull" disrupted psychological functioning and subsystems toward the new pattern of the desired ASC. These patterning stimuli may also serve to disrupt the ordinary functioning of the baseline state insofar as they are incongruent with the functioning of that state. Thus, the same stimuli may sometimes serve as both disruptive and patterning forces. For example, viewing a diagram that makes little sense in the baseline state of consciousness can be a mild disrupting force. But the same diagram, viewed in the altered state, may "make sense" or be aesthetically pleasing and thus may become a patterning force, a mandala for meditation, for example.

Steps in the Induction Process

Figure 2 sketches the basic steps of the induction process. The baseline state is symbolized here as physical blocks of various shapes and sizes (representing particular psychological subsystems or functions/structures) forming a system/construction (the state of consciousness) in a gravitational field (the environment). Blocks that touch are in relationship to each other

At the extreme left, a number of psychological structures are assembled into a stable construction, the b-SoC. A low pile of actual physical blocks like this could handle a lot of shaking and pushing - environmental or bodily change - while still maintaining their relationship with each other. The detached shapes below the base of the construction represent latent psychological potentials not available in the baseline state.

Disrupting (and patterning) forces, represented by the heavy and light arrows, respectively, are applied to begin induction. The second panel depicts this beginning and represents change *within* the baseline state. The disruptive (and patterning) forces are being applied, and while the overall construction remains

basically the same, some of the relationships within it have changed to some extent. System change has about reached its limit: at the right and left ends of the construction, for example, things are close to falling apart. Particular psychological structures/subsystems have altered as far as they can while still maintaining the overall pattern of the system.

Also shown is the changing relationship of some of the latent potentials outside consciousness, changes we must postulate from this systems approach and our knowledge of the dynamic unconscious, but about which we have little empirical data at present.

If the disrupting forces are successful in finally breaking down the organization of the baseline state, the second step of the induction process occurs, the construction/state of consciousness comes apart, and a *transitional period* occurs. Note I deliberately call this a ''period'' rather than a ''state'' to emphasize its transitional, temporary nature. In Figure 2 this transition period is depicted in the third panel as the scattering of parts of the construction, without clear-cut relationships to one another or perhaps with momentary, dissociated/unusual relationships, as with the small square, the circle, and the hexagon shown touching each other on the left side of the transition diagram.

The disrupting forces are now represented by the light arrows, as they are not as important after the disruption has actually occurred; the now more important patterning forces are represented by the heavy arrows. The patterning stimuli/forces must then push or pull the isolated psychological structures into a new construction, the third and final step of the induction process in which a new, stabilized structure, the ASC, forms, as shown in the fourth panel. Some of the psychological structures/functions present in the baseline state, such as those represented by the squares, trapezoids, circles, and small hexagon, may not be available in this new state of consciousness; other psychological functions not available in the baseline state have now become available. Some functions available in the baseline state may be available at the same or at an altered level of functioning in the ASC. There is a change in both the selection of human potentials used and the manner in which they are constructed into a working system.

Figure 2 also indicates that the patterning and disrupting forces may have to continue to be present, perhaps in attenuated form–so they are drawn with dotted line–in order for this new state to be stable. The ASC may not have enough internal stabilization at first to hold up against internal or environmental change, and situational props may be needed. For example, a person may at first have to be hypnotized in a very quiet, supportive environment in order to make the transition into hypnosis, but after he has been hypnotized a few times, the ASC is stable enough so that he can remain hypnotized under noisy, chaotic conditions. A meditator may need quiet, undisturbed conditions at first to have any success, but later be able to alter her mental state under more normal environmental conditions.

De-induction

In following this example, you probably thought of going from your ordinary state to some more exotic ASC, but this theoretical sequence applies for transition from any discrete state to any other discrete state. Thus this is also the *de-induction* process, the process of going from an ASC back to the baseline state. Disrupting forces are applied to destabilize the altered state, and patterning forces to reinstate the baseline state; a transitional period ensues, and the baseline state re-forms. Since it is generally much easier to get back into our ordinary state–it is so incredibly overlearned–we usually pay little attention to the de-induction process. It is usually much speedier than the induction process too, although it is just as complex in principle as the induction process.

ASCs as Transitional Paths to Other ASCs

It may be that some ASCs cannot be reached directly from another particular state; some intermediary state has to be traversed. The process is like crossing a stream that is too wide to leap over directly: you have to leap onto one or more stepping stones in sequence to get to the other side. Each stepping stone is a stable place in itself, but they are transitional with respect to the beginning and end points of the process. An example of this is Rapid Eye Movement (REM) sleep where most dreaming occurs. With the exception of the pathology of narcolepsy or conditions of extreme sleep deprivation, we cannot go directly from waking to REM sleep; we have to go through a long period of the intermediate non-REM sleep state.

These kinds of stable but transitional *states* should not be confused with the inherently unstable transitional *periods* discussed above, and we should be careful in our use of the words ''state'' and ''period.''

Let us now look at examples of two[6] inductions of ASCs, all starting from the ordinary waking state – the process of falling asleep and the induction of hypnosis. These examples are intended not as final analyses from the systems approach, but primarily as more concrete illustrations of how this approach to states of consciousness deals with the induction of altered states.

Going to Sleep – Perchance to Dream

You begin by lying down in a quiet, dimly lit or dark room, a safe place where you don't expect to have to deal with anything happening in your environment. The physical act of lying down, closing your eyes, being in a quiet place, immediately eliminates much of the stimuli that constitute loading stabilization, which helps to maintain your ordinary awake state. Since there are far fewer sensory stimuli coming in from the quiet environment, energy is not required for dealing with these stimuli, and some this psychological energy is freed. Some of it may, for example, go to enhancing imagery[7] Further,

incoming stimuli usually tend to pattern the kind of psychological energies that maintain your active, waking state; they activate you. Without this stimulation, then, certain kinds of psychological energies and consequent experiences are no longer generated. When these activation energies are generated, they ordinarily circulate through and further stabilize the waking state by loading it, keeping your limited resources busy with familiar, wakeful patterns.

Lying down and relaxing eliminate another major source of loading stabilization, the familiar, expected pattern of inputs from your body. Almost all your kinesthetic receptors for telling you what your body is doing respond primarily to *change*, e.g., so when you are relaxed and still for long periods, these receptors adapt out and stop sending messages into your central nervous system. Your body, in a neural impulse sense, literally disappears; it is no longer there to pattern consciousness.

Psychologically, you adopt an attitude that there is nothing to accomplish, no goals to be attained, no problems to solve, nothing important to deal with. Your attitude is that there is no normative pattern to hold your consciousness to.

It is usually futile to actively *try* to go to sleep. The active attitude that works so well in doing things within your ordinary waking state does not help here. Taking this passive attitude further withdraws attention/awareness energy from many of your feedback stabilization processes. If there is no norm to hold to, there is no need to monitor for and correct deviations from the norm. This is important for allowing thought processes and other psychological processes to drift into the hypnagogic mode.

So far these attitudes (nothing is important) and physical actions (inactions really, lying still and relaxing) are similar to the start of many other procedures for inducing various ASCs. What tips the balance toward inducing the particular ASC of sleep are the physiological factors (not that well understood, in spite of several decades of intense research on sleep) we call *tiredness*, or need to sleep, as well as your expectation that you are going to fall asleep. These tiredness factors constitute both further disrupting forces for the waking state and a patterning force or forces for shaping the transitional period into the sleep state. Their intensity is important in determining whether the induction is successful: if you are not at all tired, sleep will probably not occur. If you are very tired, sleep may occur even if the other disrupting operations (relaxing, reducing sensory input, taking a ''nothing is important'' attitude) have not been carried out.

Once the normal sleep cycle begins, a stage 1 EEG, containing rapid eye movements (REMs) will follow in about 90 minutes. Awakenings from stage1-REM periods typically produce 80% or higher dream recall, so while *dreaming* is a psychological concept, the correlation with physiology is high here. Figure 3 shows how the changed functioning of subsystems/functions, represented as irregularly bordered subsystems, and information flow routes

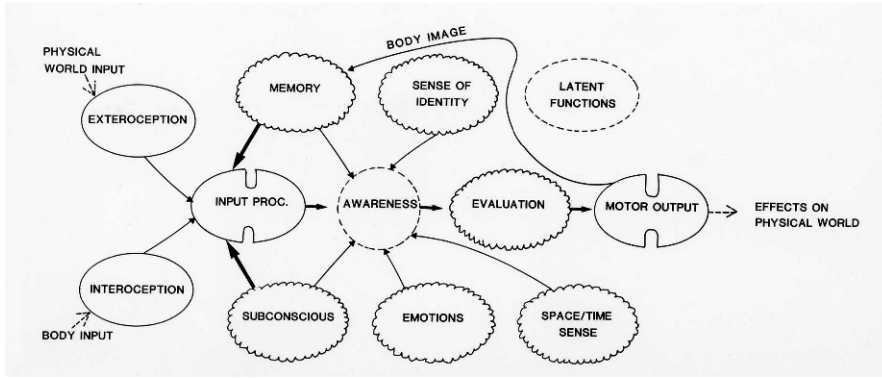

Figure 3. Ordinary dreaming as a system.

change in dreaming. This figure is provided only to indicate the direction and complexity analysis can go in, and will not be further discussed here.

Inducing Hypnosis

The procedures for inducing hypnosis are many and varied, but certain steps are common to most of these procedures. I will illustrate what is likely to happen with a subject who is reasonably talented at becoming hypnotized: there are wide individual differences, which are a stable feature of personality.

What we might call the "zero" step, since it is not usually recognized as a formal step, is to voluntarily enter a situation in which you expect to be hypnotized by someone you consider an authority on hypnosis. This set and expectation makes an enormous difference in how you respond to the situation, as discussed below.

The first overt step usually involves the hypnotist asking you sit or lie comfortably, so you do not have to exert significant effort to maintain your bodily position, and further telling you not to move and to relax your body as much as possible. This step has a variety of effects. For one thing, if you are somewhat anxious about what is going to happen, your feeling of anxiety, which intimately relates to bodily tension, is at least partially relieved if you relax. You reduce your ability to feel anxiety. This makes it easier for you to alter your state of consciousness. Also, when your body is in a relaxed position and lying still, many of the kinesthetic receptors adapt out, as in going to sleep. Thus the body as a whole begins to fade out as a conscious experience; this known, patterned stimulation fades and no longer serves as a loading and patterning force to help stabilize your ordinary state.

Second, the hypnotist commonly tells you to listen only to his voice and ignore other thoughts or sensations that come into your mind. Ordinarily you constantly scan the environment to see if important stimuli are present and action is required. This constant scanning and thinking about what you sense

keeps up a continuous, varied pattern of information and energy exchanges among subsystems, which tends to keep subsystems active in the waking state pattern: as varied perceptions come in, you must decide whether they are important, you must draw on memories from the past in making these decisions, etc. By withdrawing attention/awareness energy from this scanning of the environment, you withdraw a good deal of psychological energy and activity from a number of subsystems: a major loading and patterning stabilization process is attenuated.

A third common instruction is that you should not *think about* what the hypnotist is saying, but just listen to it passively. If the hypnotist says your arm is feeling heavy, you are not encouraged to think, "He says it's feeling heavy, I wonder if it really will get heavy? I remember it got heavy a long time ago but that's because there was a weight on it; well, I guess I shouldn't be doubting…" In your ordinary state you constantly think about what is being said to you and what is happening to you, and this maintains a great deal of evaluative and decision-making activity and again activates other subsystems. Thus, this passive attitude step also slows down the constant thinking that helps to maintain your ordinary state through loading stabilization.

Fourth, you are frequently told to focus your attention on some particular thing in addition to the hypnotist's voice. Let us take the example of your being asked to look fixedly at some simple object like a candle flame. This fixation serves to further reduce your scanning of the environment, with the same effects mentioned above, but it has an additional effect. It is unusual for you in your ordinary d-SoC to stare fixedly at one thing. If you do, all sorts of unexpected (to most people) visual effects eventually occur because your retina becomes fatigued. Colored halos start to appear around the object being stared at, e.g., or shadows appear and disappear, apparent movements occur, parts of the object fade. To the extent that these are not part of your usual experience, they constitute a kind of input that the Input-Processing subsystem is not used to handling, and so such inputs tend to disrupt the normal functioning of this subsystem.

Further, because the hypnotist earlier stated or implied that he has the power to help you have unusual experiences, the fact that you are now having unusual experiences enhances the prestige of the hypnotist and gives you more trust in him. This is a kind of "trick": by using physiological effects that you do not realize are the expected result of staring at anything, the hypnotist manages to take credit for inducing the effects and so enhances his psychological standing. The importance of this will become even clearer later when we discuss the Sense of Identity subsystem.

Fifth, the hypnotist commonly suggests to you that you are feeling sleepy or drowsy. This elicits a variety of memory associations that help the induction process. Since going to sleep means that your waking state breaks down, this suggestion acts as a disruptive force. And since going to sleep is associated with a fading out of your body image, this suggestion enhances the fading of the body image that is already occurring because of the adaptation of kinesthetic

receptors to your relaxed, still posture. Further, since going to sleep is a passive activity, the suggestion encourages a sense of passivity on your part and so reinforces the earlier instructions not to think about what the hypnotist is saying but simply to accept it. The references to sleep also draw up memories and expectations of your identity fading, so energy is not required to keep evaluating the situation in terms of your personal values.

Sixth, as well as suggesting sleep, the hypnotist often explicitly indicates that this sleep is not quite the same as real sleep because you will still hear and respond to him. The hypnotist may not need to suggest this overtly: almost everyone in our culture knows enough about hypnosis to realize that the subject can still hear the hypnotist. This is a specific patterning force. The suggestions telling you that what is happening is like sleep primarily serve to disrupt your baseline state, but since the hypnotist does not want you actually to go to sleep, he adds a patterning force to produce a passive, sleep*like* state in which communication with the hypnotist is still effective.

Seventh, once you appear passive and relaxed, most hypnotic procedures go on to simple motor suggestions, such as having you hold an arm horizontally out in front of you and telling you it is getting heavy, very heavy. Motor suggestions like this are relatively easy for most people to experience, even without a previous hypnotic induction procedure, and as you begin to respond to these suggestions, the hypnotist's prestige is further enhanced. By not *thinking about* and *evaluating* suggestions, they tend to have strong effects.

This automatic response to suggestion affects your Sense of Identity subsystem. Ordinarily it is your own mental "voice" inside you that tells you to do a thing that you then do. Now the hypnotist's voice takes over this role, and your sense of self begins to include the hypnotist. The special "modulation" or quality of information from this subsystem that constitutes the ego sense (discussed in Tart 1975) is added to the stimuli that would ordinarily be perceived as the voice of an outsider. Psychoanalysts theorized that this is a *transference* element of hypnosis, especially when some of the transference involves parental transferences onto the hypnotist. Mommy told you she would kiss your hurt and it would feel better, and it did! As Mommy and the hypnotist fuse at some level of your mind, the hypnotist's authority increases. The deliberate or implicit encouragement of identification with the hypnotist's voice is an application of patterning forces.

Success with simple motor suggestions also produces a novel kind of body stimulation: you feel your body moving, but with different qualities than ordinarily. Your arm, for instance, feels exceptionally heavy and seems to move *by itself*. This kind of experience again does not fit the habitual input-processing patterns, and so tends both to further disrupt the stabilization of your baseline state and to help pattern the hypnotic state.

As you respond well to simple motor suggestions, the hypnotist usually goes on to harder and more impressive motor suggestions and various kinds of

cognitive alteration suggestions. Continued success leads to increasing inclusion of the hypnotist within your ego sense.

Finally, we should note that an important factor in understanding the hypnotic induction technique is the subject's implicit expectations of what it is like to be hypnotized and how a hypnotized subject behaves. Shor (1964) conducted a survey showing that among college students there is a fairly good general knowledge of what hypnosis is like, in spite of some misconceptions. So if a subject agrees to be hypnotized and believes that the hypnotist can do it, *he has implicit expectations that affect his reactions to the particular things the hypnotist does*. We will return to the importance of implicit expectations later.

The Hypnotic State

If the induction is successful and a neutral hypnotic state is developed[8] the result is an ASC characterized by a quiet mind (Tart, 1966); most of the subsystems and structures of the system of consciousness are relatively inactive, as compared to the busyness of ordinary consciousness. Typically, if a deeply hypnotized subject is asked what he is thinking about or experiencing, the answer is "Nothing." However, this neutral hypnotic state is also characterized by greatly enhanced suggestibility, a greater mobility of attention/awareness energy, so when a particular experience is suggested to the subject he usually experiences it far more vividly than he could in his ordinary d-SoC, often to the point of total experiential reality. Thus the hypnotic state shows a high flexibility and intensity of functioning, even though it is relatively quiet between particular functionings. The state is also characterized by a quality called *rapport*, a functioning of the Sense of Identity subsystem to include the hypnotist as part of the subject's own ego.

It is easy to see how the various techniques mentioned above destabilize the ordinary pattern and operate on various psychological subsystems to push them toward extreme values of functioning. But where is the actual transition from awake-but-unhypnotized to hypnotized? We do not know. Studies of hypnosis have generally paid little attention to the transition between hypnosis and waking. Some psychoanalytically oriented case studies (Gill & Brenman, 1959) have reported marked transitional effects, but no study has tried to map the exact nature and extent of the quantum jump.

This concludes our brief survey of the process of inducing an ASC. In some ways it is too simplified: the actual situation in which a person, either by himself or with the help of another, sits down to induce an ASC is influenced by many variables that affect our lives, especially those implicit factors stemming from our personal and cultural histories that are so hard for us to see. Further, this analysis is in terms of "normal" factors readily understood in consensus consciousness: there may well be transpersonal factors we know little of yet.

Set and Setting, Expectation, What It Means!

I cannot emphasize strongly enough that the procedures involved in inducing an ASC have to be looked at thoroughly and subtly, not just taken at face value. The implicit as well as the explicit needs to be understood.

To illustrate, George Estabrooks (1943), one of the early modern researchers in hypnosis, decided to see if hypnosis could be induced by simply recording the verbal procedure on a phonograph record and playing it to a group of volunteer student subjects. Estabrooks felt this was important to investigate, as most theories of hypnosis at that time put great emphasis on *rapport*, the subtle and special interpersonal relationship between hypnotist and subject. Without the proper rapport, hypnosis would not occur. Clearly one would not expect much interpersonal interaction, subtle or overt, between a person and a phonograph record.

Estabrooks recorded a typical hypnotic induction procedure–verbal suggestions about relaxing, sleepiness, etc.–and recruited some volunteers from one of the college classes he taught. At the time of the experiment, he told the students the hypnosis experiment would start and then he put the record on. To his consternation, he found he had brought the wrong record from his office: he was playing a record of Swiss yodeling! Deciding to let it entertain his subjects while he got the right one, he said nothing but left and went to his office.

When he returned, he found one subject was in a deep hypnotic state!

The professor had said this record would hypnotize him, and the student went into hypnosis.

When looking at any ASC induction procedure, there is, at the overt level, the actual nature of the induction procedure. A physical posture or action may be specified, certain words said, suggestions with a particular and apparently clear overt meaning given, directions as to controlling attention, etc. But behind this overt, readily observable level, what do each of these things *mean* to the person whose consciousness may be affected? We almost always come into situation with a particular mental/emotional set, the setting then interacts with that set and our expectations, part of our mind is always trying to figure out what things really mean, etc.

The simple direction, for example, ''Pay attention to the natural flow of your breathing,'' sounds straightforward. Give that instruction to, say, a Western college student participating in a psychology experiment for extra credit in a course she is taking, versus to a similar aged young woman who has traveled to India to find a spiritual path, and the overall meaning created or sensed by the instructee can vary enormously. To the experimental student, it might mean ''We want you to physically relax and paying attention to your breath is a way of relaxing.'' To the seeker, it might mean ''Now a real Teacher is getting me in touch with my psychic energy and wonderful things may happen!''

To at least one of Estabrooks' students, the unusual sounds of the phonograph recording, combined with the expectation from *Professor* Estabrooks, an authority and psychologist, that the sounds he would hear would hypnotize him, were sufficient to do it.

Our Monk, Our Alchemist, Our Shaman

Returning to our starting observations, what are some of the things the systems approach would suggest looking at in trying to understand the behaviors of our Tibetan monk, our alchemist, and our shaman?

There are direct physical and sensory consequences of our Tibetan monk twirling his hand-held prayer wheel. It starts as a fully voluntary action, he has to figure out how to keep it spinning, but it soon turns into a semi-conscious action, he can keep it spinning without much attention and use most of his attention for something else. A small and continuous amount of muscular effort is needed, and low-level but steady sensory impressions from the muscle activity and, if you look at it, the visual appearance of the prayer wheel, are present. These capture and stabilize some of his attention.

But what are the psychological set and setting, the expectations, the overt and implicit *meanings* of spinning the prayer wheel, meanings which modulate the effects of the actions and perceptions? To mention just some:

First, for our monk, the set and setting are Tibetan Buddhism, including such explicit beliefs as that

1. We live in a state of illusion (*samsara*) that leads to unnecessary suffering,
2. Beneath our ordinary self we are of the same nature as Buddhas, so
3. Liberation is possible for us,
4. Our actions have consequences (*karma*) that lead toward liberation or generate more suffering,
5. Prayers may help us,
6. The mechanical spinning (with proper mental attitude) of the prayer wheel, which is filled with written prayers, amounts to praying them,
7. Mental or oral repetition of mantras or prayers, along with spinning the prayer wheel increase the effectiveness of our efforts toward liberation, and that
8. The small amount of conscious effort needed to keep the wheel spinning provides a kind of meditative stabilization point (*shamatha* with an object) that makes us less likely to mentally wander deeper into samsara and create bad karma.

While involved in the external process of spinning the prayer wheel, the monk may share the Buddhist belief that it is the inner mental processes that are really the most important, so the outer actions are a vehicle for guiding the mind, rather than the essence of the act.

Implicit beliefs and expectations may affect the action of spinning the prayer wheel, such as the monk's relationship to a teacher who instructed him to use a prayer wheel, his earlier cultural-given expectations, his other meditative skills, etc.

Our alchemist is stirring, stirring, stirring, perhaps for hours on end. I do not have in-depth scholarly knowledge of alchemy, but, similar to the monk's meanings above, the alchemist views his actions in the context of such beliefs as

1. We are fallen from Grace,
2. We have a higher nature, gold hidden in the dross, that means
3. Spiritual advancement/salvation/transformation is possible for us,
4. Our actions certainly have consequences that lead toward success or failure,
5. Prayers to God, Jesus, the Holy Ghost, and various angels, Powers and Principalities may aid us, and that
6. The repeated circular stirring is essential to the proper transformation of the material and eventually of the alchemist to a higher spiritual state. I do not know how much various alchemists focused on the importance of inner mental attitudes as part of the process as opposed to depending on the external actions to stabilize the mind, although I am sure there was great variation here. And strong focus on particular external actions, which are believed to be critical to the enterprise, may have the same or similar effects to a more direct attempt to control mental processes.

Our shaman: He is not merely drawing a circle over and over; he is

1. *Concentrating* (the essence of most meditation procedures) on drawing the circle over and over; he is probably
2. Praying to his guardian spirits,
3. Singing a song of power to go with the repeating circle drawing, all
4. In a belief/expectation set and setting context as rich as our monk's or alchemist's. You or I could repeatedly draw a circle over and over like that, but while the external actions would be essentially the same, we are unlikely to experience them the same way….

If we want to understand various esoteric systems, then, it is helpful but not enough to study their texts and oral traditions, at some point we must enter into the ASCs that form the experiential basis and practice of the traditions. To enter such states, to create the *state-specific sciences* I have advocated elsewhere (Tart, 1972; 1998), we must experiment with the techniques for inducing the necessary ASCs, and that includes understanding not just the externals of the techniques but the internals, the world view and expectations that are an essential part of them. As transpersonal psychology better understands inducing ASCs and learns to do it more effectively, so the induction techniques are successful with more people, our knowledge base will expand to include the state-specific knowledge that is at the heart of the transpersonal.

I hope this approach will aid our understanding.

Notes

[1] I want to express my gratitude to the Esalen Center for Theory and Research for making possible the conference that stimulated this article.

[2] Some states, of course, may be very fleeting or very unstable and so hard to study, but we will not deal with those here.

[3] This is a psychologically based conceptual system, reflecting both my primary training and my current scientific position as an interactive dualist with regard to body and mind. How these psychological subsystems/functions relate to particular aspects of brain functioning is an issue beyond the scope of this paper.

[4] I have described these various processes as loading stabilization, positive feedback stabilization, negative feedback stabilization, and limiting stabilization.

[5] A major problem in the psychological literature on ASCs is *equating the procedure of induction with the presence of an ASC*, a kind of premature parsimony aspect of "objectivity." Everyone can agree–objectively–over whether an investigator has carried out a hypnotic induction procedure (e.g. read the "magic words" aloud, in the presence of an experimental subject). Many subjects do not get hypnotized, though, so to count them as "hypnotized subjects" introduces all sorts of confusion. Or a group of experimental subjects may be classified as "meditating" because they have been given instructions on how to meditate and told to do so, yet we have no measure of how successful they were in carrying out the instructions. *The presence or absence of an ASC at a particular time must be assessed from reports of the subject*, even if this is not as easy a procedure as the "objective" presence or absence of an induction ritual.

[6] I will not cover the treatment of meditative states that appeared in the original *States of Consciousness* book, as I want to rethink some aspects of it.

[7] It may also be the case–my personal observation suggests it–that wide-ranging imagery is actually being generated all the time, the *bhavanga-sota* or *bhavanga-citta* that Buddhism talks about, but its presence is obscured by ordinary waking activity.

[8] I describe a typical deep hypnotic state as created within contemporary Western culture. How much of this is hypnosis per se and how much a cultural creation is unknown.

References

Estabrooks, G. (1943). *Hypnotism*. New York: Dutton.

Shor, R. (1964). The accuracy of estimating the relative difficulty of typical hypnotic phenomena. *International Journal of Clinical and Experimental Hypnosis*, *12*, 191–201.

Stent, G. (1972). Prematurity and uniqueness in scientific discovery. *Advances in the Biosciences*, *8*, 443–449.

Tart, C. (1966). *Spontaneous thought and imagery in the hypnotic state: Psychophysiological correlates*. Paper presented to the American Psychological Association, New York, New York.

Tart, C. (1972). States of consciousness and state-specific sciences. *Science*, *176*, 1203–1210.

Tart, C. (1975). *States of consciousness*. New York: Dutton.

Tart, C. (1998). Investigating altered states of consciousness on their own terms: A proposal for the creation of state-specific sciences. *Ciencia e Cultura, Journal of the Brazilian Association for the Advancement of Science*, *50*(2/3), 103–116.

The Author

Charles T. Tart, Ph.D., teaches at the Institute of Transpersonal Psychology, and focuses on building bridges between the genuinely spiritual and the

genuinely scientific, as opposed to the too common scientistic a priori denial of spirituality. His books include two that have been called classics, *Altered States of Consciousness* (1969) and *Transpersonal Psychologies* (1975), as well as *Living the Mindful Life* (1994) and, his latest, *The End of Materialism: How Evidence of the Paranormal is Bringing Science and Spirit Together* (2009). He tries to ground his thoughts in reality and toward this end earned a Black Belt in Aikido and is a semi-regular mindfulness meditator, as well as attempting Gurdjieffian mindfulness in everyday life.