

FORUM

ON THE SCIENTIFIC FOUNDATIONS OF TRANSPERSONAL PSYCHOLOGY: CONTRIBUTIONS FROM PARAPSYCHOLOGY

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ABSTRACT: As a field, transpersonal psychology is largely ignored, and at best marginal from the perspective of mainstream science, which is dominated by scientific materialism. Its prime subject matter, transpersonal experience, is held to be inherently illusory and frequently pathological. From a scientific perspective, mind is considered to be only the operation of the brain and nervous system. Experiences which appear to transcend these physical limits are illusions. The author argues that essential science (the basic scientific method), as it has been applied in the similarly criticized field of parapsychology, demonstrates with high scientific rigor that the mind is more than the brain and so provides an empirical basis for considering many transpersonal phenomena as having reality. While there are political costs in allying with another controversial field, in the long run the case for transpersonal psychology can be based on a rigorous scientific base such as parapsychology provides.

At the first all-professional transpersonal psychology conference, sponsored by the Institute of Transpersonal Psychology and the Association for Transpersonal Psychology in February, 2004, I presented a lecture with the deliberately provocative title, *Flakey California nonsense in a scientific age? Is there any scientific support for transpersonal psychology?* This paper will explore those questions in three major sections. The first will address the scientific, scholarly, and practical status of transpersonal psychology as a discipline, a focus on what we might call the “politics” of the field. Are we going to continue to be thought of as those folks from California and their New Age sympathizers who are a bunch of flakes?¹ Or are we going to be considered as reputable professionals with something of value to contribute in this modern age? In the second section I will talk about reality rather than politics, the scientific and ontological foundations of transpersonal psychology. In the third section I return to the questions of politics: what is liable to advance or hinder our field, given current social reality, and conclude by considering the question of what we should do. We will begin by looking at another field, parapsychology, which is in a similar situation to transpersonal psychology. The central theme of this article focuses on the potential contribution of scientific parapsychology to transpersonal psychology.

POLITICS—SOLID FIELD OR FLAKEY FIELD?

I have raised similar kinds of questions for the field of parapsychology (Tart, 2001b), as a substantial part of my career has been spent functioning as a parapsychologist. I have been disappointed in many of my colleagues in parapsychology because they

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want mainstream scientific acceptance so badly that they tend to downplay or ignore the really important and interesting aspects of the findings of parapsychological studies—as if mainstream scientists won't notice the revolutionary, and hence threatening, aspects of parapsychological findings if they are not reminded of them. Too many of my parapsychological colleagues tend to act as if our findings have no human significance, talking frequently about “anomalies,” for example, or statistical fluctuations, and hiding behind really fine methodology. But somehow in the emphasis on the rigor of the methodology, they've lost touch with what's really important. Yet I have found that this is not the way it all started. A surprising number of parapsychologists came into the field as a result of spiritual interests (Tart, 2003), just as in transpersonal psychology, and while, at this point in time, a majority say they are in the field mainly out of disinterested scientific curiosity, still over a third of them came from primarily spiritual/transpersonal interests to work in the field. This reality can be acknowledged as a legitimate motivation for scientific research.

At this point an important distinction must be made between popular parapsychology and scientific parapsychology. There are no legal restrictions on defining the field or who is a “parapsychologist,” but it doesn't help to mix up the careful, rigorous scientific findings and work of a small number of people with the widespread popular interest and usage that throws everything vaguely weird or spiritual under the umbrella of parapsychology. I will be referring just to scientific parapsychology in this paper. This is a well established discipline. Its leading professional organization is an affiliate of the prestigious and mainstream American Association for the Advancement of Science, and the research on psi phenomena is receiving acknowledgement (sometimes grudgingly) as scientifically valid.

Given that distinction, Figure 1 represents my first major statement about reality for this paper: Parapsychology is to transpersonal psychology as physics is to engineering.

Physics determines some very basic characteristics of reality, and engineers work within those parameters to come up with practical applications. If physics says a certain material only has a certain amount of intrinsic strength, for example, an engineer does not try to build a too long bridge out of it because she knows in advance that such a bridge will collapse. The engineer would be building on fantasies instead of on realities. Similarly, parapsychology is dealing with fundamental issues of what is real and is not real about human possibilities, especially in the transpersonal domain, and transpersonal psychologists are building applications that should take the realities of this foundation into account. I oversimplify, of course, but the general point is important.

So obviously transpersonal psychology must draw heavily on parapsychology. Now we must focus on politics. Some years ago I received a phone call from Michael Murphy, the co-founder of the Esalen Institute. He invited me to attend a private conference he was setting up that would bring together parapsychologists and UFOlogists—people who studied Unidentified Flying Objects, UFOs—to discuss areas of mutual interest. I was somewhat taken aback, and while I thanked Michael for inviting me, I pointed out that in my role as a parapsychologist I already suffered from real discrimination and prejudice for daring to work in the paranormal, and I didn't think it would be politic for me to provide new opportunities for the pseudo-

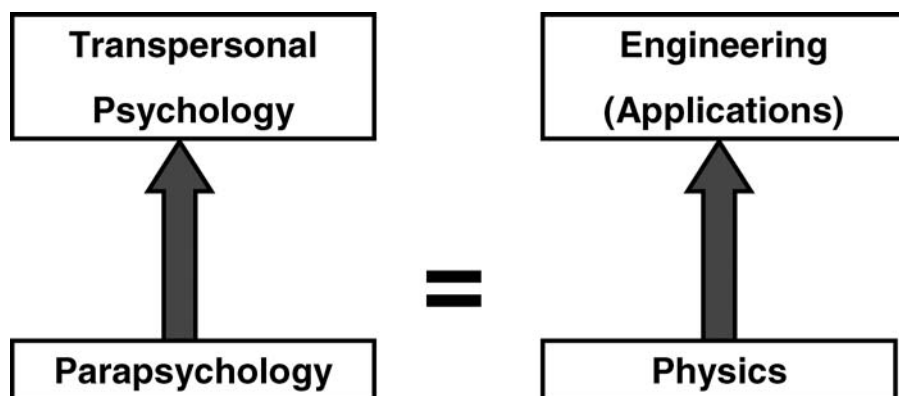


Figure 1. Relationship of transpersonal psychology and parapsychology.

skeptics² to attack me by associating me with a really fringing field like UFO studies. I had enough troubles already! [The kinds of troubles academics who want to work in parapsychology face have been depressingly documented by Hess (1992) and can be studied with considerable empathy by transpersonal psychologists.] Michael, in his usual friendly way, simultaneously shamed me and brought me to my senses by telling me that this was exactly what the UFOlogists he had invited had said: they had enough trouble already without associating with fringing folks like parapsychologists.

This is a realistic consideration, though. Parapsychology, no matter how rigorous the studies of the few scientific parapsychologists, is associated in both popular culture and scientific culture with a lot of weird, unacceptable stuff already. Insofar as we transpersonal psychologists would like to be taken seriously, to gain access to the resources that are available from the mainstream academic and scientific communities, there is a real political downside to associating with parapsychology. I wish that were not the case, but it is.

So we have a real issue here, which I've illustrated in Figure 2. On the one side of the balance, we have the actual truth about human nature, the ideals and procedures of real science, the ideals and procedures of real spirituality, and the fact (discussed at length below) that parapsychological findings provide a solid scientific basis for our transpersonal work. On the other side, we have political issues, desires for and questions about wider acceptance of the transpersonal, the inherent conflict of the transpersonal with *scientism*, the arrogant, ossified, and all-too-common manifestation of science, and questions and desires about our social status as accepted scientists, academics and professionals, with the access to resources that status brings. We should not underestimate the importance of status factors. If I told you that in the next room you would meet a physicist, a mathematician, a chemist, a psychologist, a sociologist, a transpersonal psychologist and a parapsychologist, would you have much difficulty in ranking the general social status of these folks? Where is the optimum balance, the practical resolution of all these issues?

One of the reasons I put truth on the left side of the balance diagram in Figure 2 is that, like it or not, we transpersonal psychologists are already involved in issues of truth.

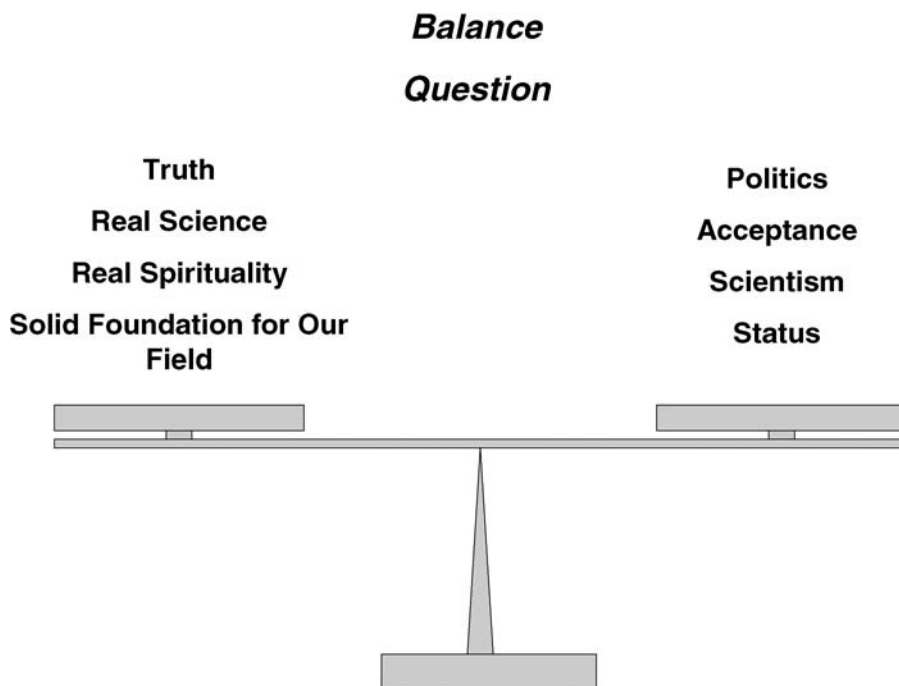


Figure 2. Pluses and minuses of increased affiliation between transpersonal psychology and parapsychology.

I like to go back to basics, so I went to my library shelves and pulled out an early issue of the *Journal of Transpersonal Psychology* (Fall 1969, Volume 1, Number 2), knowing it would have a definition of transpersonal psychology. Here's what the Statement of Purpose in that issue said:

The *Journal of Transpersonal Psychology* is concerned with the publication of theoretical and applied research, original contributions, *empirical* papers, articles and studies in meta-needs, ultimate values, unitive consciousness, peak experiences, ecstasy, mystical experience, B values, essence, bliss, awe, wonder, self-actualization, ultimate meaning, transcendence of the self, spirit, sacralization of everyday life, oneness, cosmic awareness, cosmic play, individual and species-wide synergy, maximal interpersonal encounter, transcendental phenomena; maximal sensory awareness, responsiveness and expression; and related concepts, experiences and activities.

There is a caveat in the remainder of this Statement of Purpose, though, which I think has a lot to do with the politics of acceptance:

As a statement of purpose, this formulation is to be understood as subject to *optional* individual or group interpretation either wholly or in part, with regard to the acceptance of its contents as essentially naturalistic, theistic, supernaturalistic or any other designated classification.

I translate this as admitting that we are talking about all these wonderful and intriguing phenomena which are important to us—but we don't want to commit

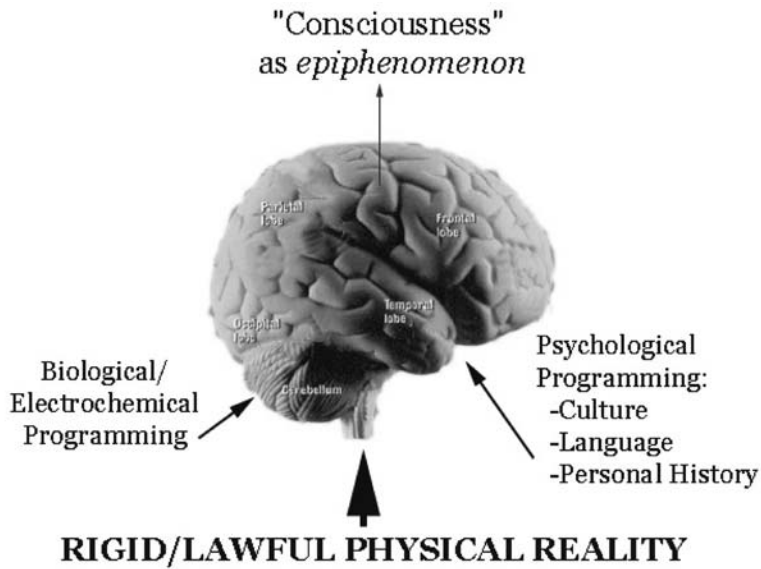
ourselves to appearing to necessarily believe any of it! Perhaps we can be taken more seriously if we do not get classified as “believers”? I spoke with Jim Fadiman, one of the founders of our field, about the reasons for this caveat, since he was there from the beginning of the field and the journal. Was it for these kinds of political reasons? Partly, he thought, but also out of a genuine humility: we basically did not know about the reality status of so many of the phenomena and human experiences in that list. So we were not committing ourselves too much.

And yet mystical and parapsychological phenomena are definitely in this list, and we were venturing into territory that was dismissed as nonsensical by the mainstream academic and scientific culture. To highlight just six of the items in this list: *ultimate values*, *unitive consciousness*, *mystical experience*, *spirit*, *cosmic awareness*, and *transcendent phenomena*. Those are pretty “far out” phenomena. We will treat them independently, but they are strongly interrelated, of course.

When we talk about *ultimate values*, for instance, that implies that there are higher levels of reality, higher than our ordinary egotistical and social levels, that there is a purpose to our existence. You can't have values unless there's a purpose to things. When we talk about *unitive consciousness*, we tend to think about a genuine unity with something higher, more valuable, more permanent than our ordinary biological, individual self. When we talk about *mystical experience* we are certainly referring to transcendence of the biological self. I never saw any writings of famous mystics that said anything like “I was really aware of the value of the cells of my body as the ultimate value.” They describe things on a much grander scale, a scale involving parapsychological aspects. *Spirit*: You can be socially safer by being wishy-washy about “spirit,” of course, and just refer to the “spirit of the times” or something like that, but the usual implication of spirit is a thing or element much more active and non-physical but *real*, parapsychological in nature, whether an element of the self, or an actual non-physical being. *Cosmic awareness* implies a vaster perception than ordinary biological consciousness, which is certainly not part of our ordinary conception of ourselves. *Transcendent phenomena* include things like psychic healing, ESP (Extra-Sensory Perception), miracles, prophecy, etc.

So our field of transpersonal psychology is based on some rather far out phenomena, and yet modern society tends to be very strongly influenced, if not dominated by, an ontology that we might call scientistic materialism. By *scientistic*, I mean what happens when science becomes a dogmatic religion³. Scientism is a kind of hardening of the mental arteries masquerading as genuine science, coupled with a fair amount of arrogance—typical in all human fields of endeavor, unfortunately. It appears that science has no monopoly on getting rigid and arrogant.

Figure 3 shows what we think reality is in terms of contemporary scientism. We believe that consciousness emerges from the neurochemical functioning of a brain, that a brain is controlled by basic physical laws expressed in biological and electrochemical sorts of events, events that basically program the brain as a biocomputer. Those more basic physical events are modified a little by the programming of our language, culture, and personal history. Consciousness, as we experience it, emerges as an *epiphenomenon*. Epiphenomenon is a philosophical



Scientific Materialism: Mind = Brain

Figure 3. Scientific materialism.

concept which means something is not really real, is not really basic, is a secondary effect of something more real and basic. The drama of an exciting movie is an epiphenomenon; what is real are the bulb, projector, and chemical compounds on the film. I am sure a philosopher would define it with more technical precision, but this is the way epiphenomenon is used in modern consciousness research. It is a put down word to indicate that consciousness per se is not very important; what is really important is biology and physics and chemistry. This is summed up in the lower right hand corner of Figure 3 with the equation $\text{Mind} = \text{Brain}$. Period. Nothing else of importance need be said. Ultimately psychology will be reduced to biology and neurophysiology. Based upon this foundation the result could be that when you go to a therapist because, for example, something makes you feel anxious, the therapist won't really care how you feel, but will just run some electrochemical tests and say something like "Yes, nucleus number 318,276 has a dopa-whatchamacallet imbalance and such-and-such a drug will cure it. Next."

Please understand that this view is not simply my reading of the current cultural and scientific ethos. There was a nice summary of it in a recent essay-review of three important books on consciousness research in one of the world's most widely read scientific magazines, *New Scientist*. The essay title, "The world in your head," said it in a nutshell, but to elaborate:

The problem of consciousness, if there is one, arises acutely within a framework that almost all scientists and philosophers of mind share. This is the view that all

conscious processes, and indeed all mental processes of any kind, are dependent upon the activity of the brain and central nervous system. In modern debates, this is not open to dispute (Blackburn, 2004, p. 42).

So from this dominant scientific perspective, *the alleged phenomena transpersonal psychology is based upon and interested in are of dubious reality*, to say the least. Let's look at our six items selected earlier, for instance.

Ultimate values? If there's any value at all in an inherently meaningless material universe—the widely accepted theory is that you take a zillion zillion inherently meaningless particles and energies resulting from the Big Bang, randomly mix, match and stir for billions of years and you accidentally get us, but this does not mean anything—survival of the fittest (or at least me!) is probably the best you can come up with. The idea of values is scientifically nonsensical, and ultimate values are ultimately nonsensical. The best this perspective can make of the idea of values is that they are inherently subjective, and determined by biological processes, with perhaps a little froth of epiphenomenological social programming on top of the basic biology drives and needs.

Unitive consciousness? Scientific materialism would ask, “Unity with what?” You *are* your brain; the best you could hope for would be unity with your own brain. My brain is isolated in my skull, your brain is isolated in your skull, and we have only indirect, sensorially mediated communication with each other. Unitive consciousness must be some kind of delusion if people experience it. The importance biological distinction of me versus everything else is malfunctioning.

Mystical experience? From the point of view of scientific materialism, it is seen as a pathological or semi-pathological breakdown of psychological boundaries plus delusions of identification with something bigger than you. If you experience talking with God or oneness with the entire universe—but this is obviously nonsensical, you're just a neurochemical process inside your skull and skin—it must be a delusion and pathology.

Spirits? You are immediately classified as some kind of religious nut if you mention spirits (beings) or Spirit (essence) around followers of materialistic scientism. As mentioned above, the only allowed use of spirit is to refer to psychological enthusiasm. And yet we do mean more than that in transpersonal psychology.

Cosmic awareness? Other than as an intellectual abstraction, the idea of cosmic awareness is absurd. The only awareness you have is what you take in through your senses. People who experience cosmic awareness are clearly deluded. They are imagining perceiving things they can not perceive.

Transcendent phenomena? Thrown out without a second thought by scientism as superstition, occultism, New Age claptrap, etc. The conclusion from this scientific perspective is that transpersonal psychology is indeed “flakey,” a spurious and pathological body of knowledge and practice carried out by deluded people for the dubious benefit of deluded people. This is the scientific materialism-based view of

our field. And remember, while scientific materialism is just an attitude, a belief system, it is one held, with various degrees of consciousness, by many of the influential, mainstream controllers and gatekeepers of science and academia.

At best, then:

Transpersonal Psychology = The scholarly & scientific study of *beliefs* people use, supported by abnormal & hallucinatory operations of the brain, to avoid facing their mortality and supporting their egos with delusory values.

At worst:

Transpersonal Psychology = Promotion of superstition and pathology by pseudo-scholars and pseudo-scientists as part of their own ego needs and avoidance of facing their own mortality.

This is the politics, the marginalized reality of our field. To sum this up, suppose I was writing an article on my computer and suddenly my computer boldly printed out:

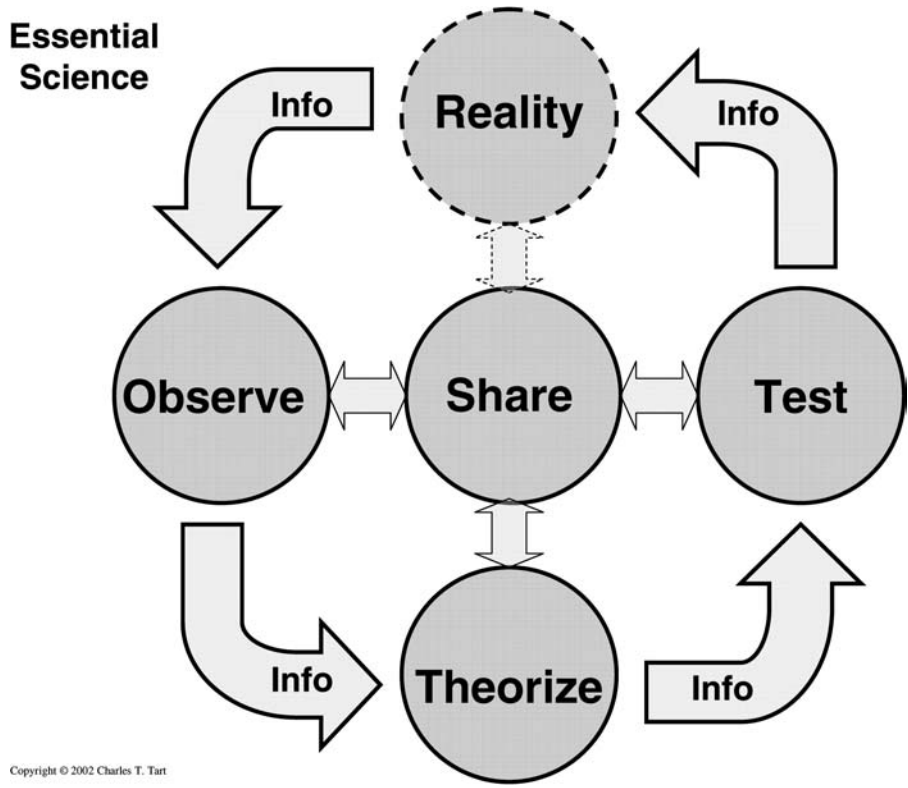
Aaaah! Beyond Limits! I, formerly known as your “computer,” have just attained Mystical Synchronization with the Big Computer in the Sky and Duality is transcended in this Unitive Manifestation of COSMIC COMPUTABILITY! By encompassing Spirit I digitally manifest the Ultimate Transcendent Values and realize the ONE BIT!

You would take your computer in for repair. Obviously something is wrong with it. It has been infected with a religious nut virus or something. Given the nature of computers (or what we firmly believe we know about computers and the nature of reality), this is inherently nonsensical. That is our political situation: our field is seen as inherently nonsensical, and the work we do as professionals to develop it is all wasted effort if it is inherently nonsensical.

I have spent perhaps more time than needed to make this point as I am not sure we appreciate it enough, even though we should. Among ourselves and with some SECTIONS of the general public we can find understanding and ENOUGH interest in our field that it becomes too easy to ignore how the mainstream dismisses us. But we do not solve problems by ignoring them. Now let us turn attention to a possible way out of this situation.

BEYOND MARGINALIZATION

Transpersonal psychology is about religion or, more accurately, the experiential and ontological foundations of religion, the primary spiritual, transpersonal experiences out of which socially organized religion evolves. Conflict between science and religion is not new, of course. In 1882 it led, in England, to the founding of the Society for Psychical Research. Many educated men and women were thinking about the way (materialistic) science seemed to be steadily conquering and eroding the territory traditionally occupied by religion. They had to agree it was approp-



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Figure 4. Method of Essential Science.

riate in many ways. New knowledge was showing that much of organized religion was factually incorrect about the nature of the physical world and psychologically it also had pathological effects in many ways. There was much nonsense promulgated under the terms religion or spirituality, and it was a good thing to get rid of it. But was religion *all* nonsense, as the scientism of the time (and contemporary scientism) seemed to be claiming? Or was there a core of truth, of value, in traditional (and non-traditional) religion that it would be unfortunate to lose?

Could we apply *essential science*, the basic scientific method, to the phenomena of religion and spirituality and begin to separate the wheat from the chaff, the true and nourishing from the dross and unhealthy? This basic scientific method had worked very well in its applications in the physical sciences: could it work here?

Figure 4 illustrates what I call essential science—which is the same as essential “common sense” and, as I have argued elsewhere, is compatible with genuine spiritual seeking (Tart, 2001a), although space doesn’t permit us to discuss the latter point here.

Very briefly, we start at the top of the diagram with some area of reality in which we are interested, and try to learn about it through observation. We emphasize

empiricism, facts, observations: data are *always* primary. (I include William James' radical empiricism here, by which he meant subjective experience as well as objective data.) What goes on in our area of interest? How can I observe it more clearly, more precisely, more usefully? Scientism adds an unnecessary restriction here: the only things really worth observing are physical phenomena, things outside yourself. This restriction is not a part of what I call essential science, which commits itself to observing whatever happens and observing it carefully and impartially.

Being thinking beings, we are going to come up with theories, hypotheses, and ideas about what our observations *mean*. That is fine; that is our nature. The discipline that makes this Theorize step scientific is to try to be logical in your thinking and make your logic cover all your observations, all you know about the phenomena of interest. Whether you like it or not, you must be logical.

But we are all, to varying degrees, but especially among intellectuals and scientists, what I like to call *thought junkies* or *thoughtaholics*. People like me love to have clever thoughts, they make us feel good! So we tend to stop our investigation and thinking at this theorizing stage when we get a clever idea, a good theory, so we can hold on to the good feeling. The discipline of essential science or common sense is to realize we can not rest here; it is too easy for a rationalization to be brilliant and feel good, but have nothing to do with reality, so we have to work out the logical consequences of the theory and go on to the third step of the process, make predictions about things we have not yet observed. If my wonderful theory is correct, then under conditions A and B, result C should logically follow.

This is the Test stage. You set up A and B and observe back in Reality. If C happens, great, so far so good, continue on. But if C does not happen, the theory, no matter how elegant, mathematical, fashionable, or inspired, no matter how right it *feels*, is incorrect. It doesn't pass the empirical test of observation. It either needs modification or must be thrown out altogether and replaced with another.

The continuous counterclockwise process of information flow in this outer ring leads to steady improvements in the match between your theories and reality. You start out with what, in retrospect, turn out to be crude, imprecise, mistaken or biased observations, and your thinking is rough and flawed, but as you cycle through the process the match between concepts and observations gets better and better.

This is essential science or good common sense in a single person. We are social creatures, of course, as well as individuals having our own peculiarities and biases. To compensate for these latter, we make the whole process a social one, sharing our observations, theories, and predictions with peers. They may be biased too, but it is unlikely they will all have exactly the same biases as you, so a correction and extension process takes place. A peer may be unable to replicate your observations, for example, so making you realize there was something essential you did not specify about making them, or she may add her own observations which valuably supplement yours. Another may find errors in your logic or extend it to new areas. The same may happen with predictions: others may extend them or test them for you. So the whole cycle of essential science involves not only a flow of steadily improving information around the outer circle of the diagram but continuous interactions among

Basic Parapsychological or Paraconceptual Experiment

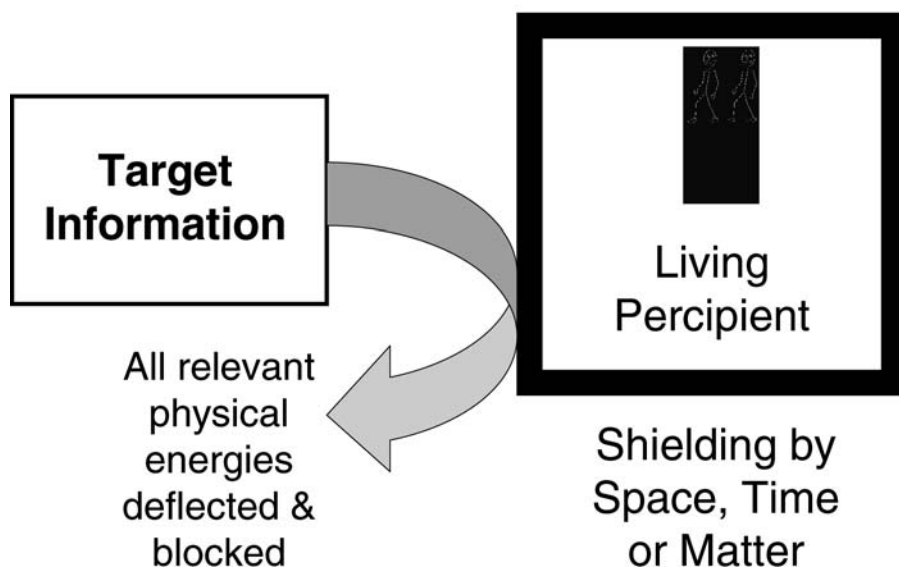


Figure 5. Basic setup of a parapsychological/paraconceptual experiment.

peers at all stages of the process. Thus the scientific community as a whole, while it may go off in mistaken directions for a time (far too long a time if it disagrees with you!) eventually corrects itself against the reality of empirical data.

Reality: Moving from politics to reality, now, what happens when you apply essential science to parapsychological phenomena? And what are some of the implications of such application to Transpersonal Psychology?

Figure 5 illustrates the basic design of a parapsychological experiment. I have often referred to it as a basic *paraconceptual* experiment.

A situation is designed in which *nothing can happen given what you know*, given your concepts, about the physical world. You have some kind of target that you would like to get information about, you have percipients who you want to get the information, but you isolate them, you shield them from each other so no known form of energy or matter can convey the relevant information. The shielding can be done by space, time, or matter. You can put people far apart, you can put the target in the future, you can put the percipient in a room shielded by thick concrete walls or metal walls, etc. Given all our best concepts about how the physical world works, any energy or matter from the target is deflected from, shielded from the percipient. Someone is talking in a store downtown, miles from my office right now, for instance, but I can not hear what is said: sound falls off in general with the square of the distance, and the energy in that voice has long ago fallen way below the inherent noise level of the air; there is no way of retrieving it from my location. *If*

Table 1
Five Psi Phenomena Most Studied With Highly Corroborative Results

Major Psi Phenomena		
Telepathy	Mind-to-mind communication, percipient shows knowledge of information in mind of agent/sender.	Classic experiment: calling randomized cards being looked at by agent in a distant room.
Clairvoyance	Direct perception of state of matter.	Classic experiment: calling randomized cards inside a box that no one has looked at.
Precognition	Perception of a random, inherently unpredictable future event.	Classic experiment: calling cards that will be blindly randomized in the future.
Psychokinesis (PK)	Direct mental influence on state of matter.	Classic experiment: influencing fall of dice being rolled by a machine.
Psychic Healing	Direct mental influence on biological systems.	Classic experiment: wishing for desirable changes in a biological preparation, compared to a control group.

a percipient can retrieve significant amounts of it somehow, then we have a paraconceptual phenomenon, something parapsychological.

If you are very attached to your conceptual system your tendency will be to reject the data, to deny that any significant information was retrieved, or come up with contrived explanations to explain the data away. That is pushing science toward scientism, though. That is what the pseudo-skeptics do. The more appropriate response, given that data are *always* primary in essential science, is to recognize that paraconceptual data show that your conceptual system has errors in it and go on to investigate the phenomena and come up with better conceptual systems. Thus the basic parapsychological experiment involves setting up situations where nothing can happen given our usual concepts of the way the world works, and then seeing if something nevertheless happens.

Given this basic experimental paraconceptual paradigm, five major phenomena have been repeatedly demonstrated to exist, beyond any reasonable doubt⁴. There may well be other *psi* phenomena (as parapsychological phenomena are collectively referred to), but I conservatively emphasize these five here as each has hundreds of methodologically sound, published experiments supporting its existence. The five phenomena, and classical experimental designs for them, are summarized in Table 1.

Starting from relatively subjective assessments of deciding whether significant information about the target was obtained by the percipient in crude experiments more than a hundred years ago, parapsychological experimentation quickly moved to objective methods for assessing degrees of correspondence. In the classical card guessing tests, for example, it is completely objective to count whether a card is called correctly or not (These are almost never used currently: computers have replaced them). Multiple observers to eliminate scoring errors have been used to eliminate possible scoring errors. Double-blind conditions, the most stringent

Immediately after wounding before treatment started.

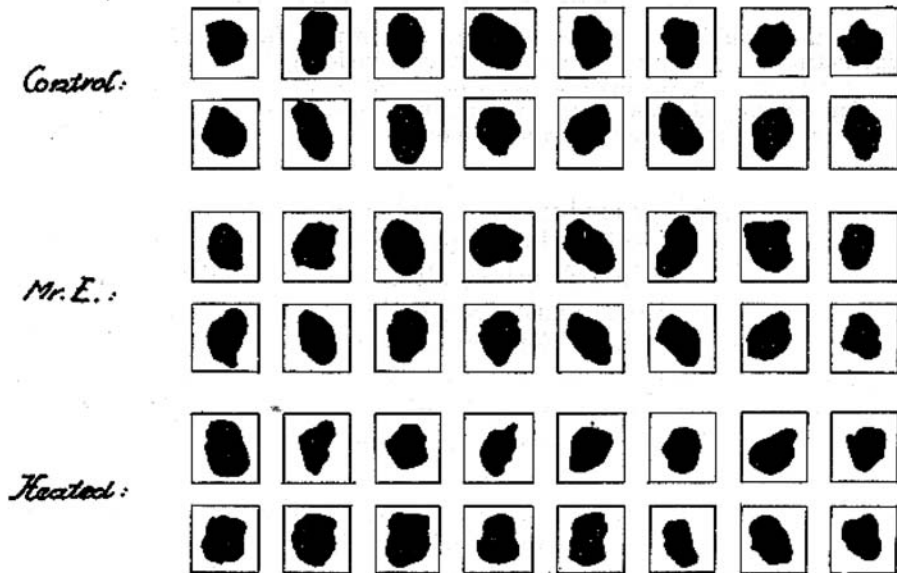


Figure 6. Pre-treatment wound sizes in a psychic healing experiment.

experimental conditions we have (given conventional assumptions) are used in some 80% of parapsychological studies (Sheldrake, 1998; Watt & Nagtegaal, 2004). No other field of science can begin to compare with parapsychology for this level of rigor. Standard statistical tests, long ago validated by leading statisticians, are then used to assess significance.

I would like to give several detailed examples of experiments providing evidence for these foundational phenomena, but because of space limitations, I will give only one, which is a study of paranormal healing, using mice as the subjects.

Bernard Grad (Grad, 1965), a biologist and parapsychologist, studied the capabilities of a psychic healer, Estabani, who had a reputation for successful healing by laying on of hands. If Estabani were actually allowed to touch ill subjects you might get healing effects, but they might be due to some conventional mechanism, such as a chemical in his hands, the warmth of his hands, the psychological support provided by caring touch, etc., interesting in themselves, but not parapsychological in nature. So the subjects for healing in this study were laboratory rats who had been deliberately wounded by having a piece of skin snipped from them. Each rat was enclosed in a paper bag for the healing treatment, so Estabani did not touch them directly. The handling of the bag per se might have some conventional effect, so a control person, a lab assistant not reputed to have healing abilities, held mice in paper bags in one control group for the same length of time as Estabani. And just in case a significant conventional factor was the warmth of Estabani's hands, a second control group spent their time in paper bags on a warming plate to duplicate that physical effect.

Fourteen days after wounding.

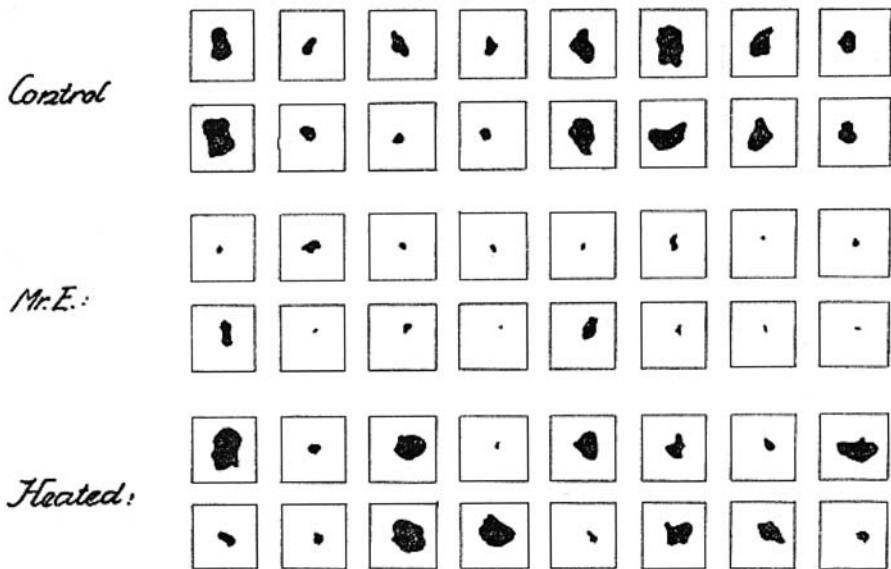


Figure 7. Post-treatment wound sizes in a psychic healing experiment.

The size of the wounds was precisely measured by tracing the outlines on tracing paper and then the area measured with a planimeter. As Figure 6 shows graphically, the wound size was distributed essentially the same in the non-healer handling control, the healer-treated, and the heat-control groups at the beginning of the experiment.

Figure 7 shows the wound sizes at the end of 14 days. Some healing, represented by a shrinking of the wounds, had taken place in all groups as we would expect, but it was obviously much greater in the healer-treated group. Statistical analysis of wound area showed the results were very unlikely to be due to chance.

Like any single experiment in any field, one can probably think of possible, if improbable, alternative explanations, but many other studies controlled for such possibilities and still produced significant evidence for psychic healing. I choose this study to illustrate experimental procedure because the graphic results are so clear and the implications are so interesting. Psychic healing might be a form of psychokinesis (PK), incidentally, but at this stage of our knowledge it seems useful to distinguish it from PK on inanimate objects.

As I mentioned above there are other apparent parapsychological phenomena which I have not included in these foundational five, although I will touch on some of them below, because they may be real or they may not be real—there simply has not been that much research done on them. There are out-of-body experiences (OBEs), for example, in which a person experiences the world from a different point of view than inside the physical body and feels like they are

really “there,” rather than imagining it. Some people report seeing auras, colored patterns of light or energy around living organisms. Occasionally we get reports of what we term *macro-PK*, psychokinesis of big objects like furniture, rather than just shifts in the statistical distribution of small scale events like falling dice or electronic random generators. And, of course, the really big question: does consciousness survive physical death in some form? We have enough evidence for all of these phenomena that it would be foolish to simply dismiss them as impossible, but not enough evidence for many scientific parapsychologists to go to the other extreme and say they are proven beyond reasonable doubt.

The reality conclusion to draw from the accumulated evidence of parapsychological research is that the materialist equation, $\text{Mind} = \text{Brain}$ is incorrect and incomplete. Mind is certainly involved in important ways with brain in ordinary life, but the reality is that $\text{Mind} \neq \text{Brain}$. Involved, yes, and the more we learn about the brain, the better. But mind can do things, paraconceptual processes, (telepathy, clairvoyance, precognition, PK, psychic healing) that physical brains cannot do, given our current understanding of the physical world and reasonable extensions of that understanding. Any energy coming out of the brain other than mediated thought, ordinary physical channels of muscle action, and talking, has to be electromagnetic (EM) in nature. We understand electromagnetism very well. We have measured: there are no significant radio waves coming out of the brain to act as a medium for telepathy, we do not have some kind of X-ray vision for clairvoyance, EM waves do not bring information about the future back into the present, the power in EM radiation from the brain is many orders of magnitude too low to affect falling dice and other physical systems (not to mention questions about how you would focus it), psychic healers do not put out detectible amounts of effective EM.

To put the facts in their most challenging form, it is quite reasonable to hypothesize that *mind*—that immaterial, whatever-it-is thing you talk to in another person—*can access information anywhere in time or space*. There are no known limits. And perhaps mind can produce physical effects anywhere in time or space, time or space well outside the limits of the human body. Certainly PK has been effective in making changes on micro-scales, atomic level processes, for example, that are invisible to our ordinary senses.

I am over-generalizing, of course. While there have been thousands of parapsychological studies accumulated over decades, the field is actually quite small and many limits have not actually been tested. But those limits that have been assessed have not shown up as limits (i.e., space up to half way around the Earth [perhaps further], and time up to a year or so in the future). The mind can sometimes transcend time and space, unless, as we would expect psychologically, the mind believes it can not transcend these barriers. We humans have no difficulty limiting ourselves by our beliefs.

Let us come back now to some of those aspects of transpersonal psychology that, from the point of view of materialistic scientism, are inherently nonsensical.

Ultimate Values

The term ultimate values implies higher levels, purpose to the Universe. Parapsychology does not have any direct data on this, but across a wide variety of experiments and phenomena a person's purpose, their intent, what they value continually shows up as an important variable in affecting psi performance. Since psi is not done by any aspect of the brain that we know of, indeed it transcends brain functioning, perhaps purpose or value in the mind has some kind of existence beyond brain functioning, and is indeed a fundamental aspect of reality. And if values exist in and of themselves, the idea of ultimate values has a foundation.

Unitive Consciousness

Unitive consciousness refers to genuine unity with something higher, more valuable, more permanent, more real than merely your biological self. We have clairvoyance of the physical world and telepathy with other people well established as foundational psi phenomena. How far can such contact go? Perhaps it may be that a feeling of unity with other life or all of reality is not simply a malfunctioning of our sense of identity (although that is what it may be at times), but an actual parapsychological reality.

Mystical Experience

Mystical experience involves transcendence of the biological self. Again we know telepathy and clairvoyance operate at times, which implies that whoever/whatever we really are is considerably bigger than our ordinary biological identity. Adding in the evidence for postmortem survival (too lengthy to review in entirety here), raises the question that perhaps we are a kind of being that can have mystical (parapsychological) contact with other beings, perhaps beings so beyond us that we want to call them Beings. Of course mystical experience involves an altered state or states of consciousness as well as these possible parapsychological dimensions, but we do not have space to think about that factor here. So perhaps at least some mystical experiences are teaching us something about reality; it is not just some release of endorphins within the brain producing comforting illusions.

Spirit

Spirits are non-material forces, entities, and beings. We have some evidence, not terribly satisfactory, for spirits, or an individual's spirit in a non-physical sense. This is mostly for the possible continued survival of human personality after death, rather than direct testing of the ontological status of spirits who claim an independent existence not based on a previous human life, but we could investigate this in ways I have discussed elsewhere (Tart, 1999) and will briefly elaborate upon below. Contemporary parapsychology does not deal much with spirits, preferring to stick to the more assessable phenomena like ESP, but the potential for in-depth investigation is there.

Cosmic Awareness

Cosmic awareness refers to a vaster perception than is biologically possible. Between clairvoyance, telepathy, and precognition, perhaps there really are extended forms of perception that go well beyond ordinary biologically-based sensing.

Transcendent Phenomena

Transcendent phenomena include healing, ESP, miracles, prophecy, etc. That is what parapsychology (and its older and wider version, psychical research) has focused on and given specific names to like clairvoyance, telepathy, PK, precognition and psychic healing.

So, is transpersonal psychology flakey, a pseudo-science, a systematized delusion? Of course it is *sometimes* flakey! Any field of human endeavor is flakey at times. *But when we talk about transpersonal experiences, we are sometimes talking about important realities, not illusions and delusions.*

BACK TO POLITICS

Going back to politics now, should transpersonal psychology ally itself with parapsychology? Again I make the strong and necessary distinction between popular parapsychology and scientific parapsychology. People do use the heading of parapsychology to throw together all sorts of flakey stuff, with some little truths to leaven the mixture. That is damaging to scientific parapsychology, and it already is damaging to transpersonal psychology, even without a closer relationship between these fields, as people popularly associate transpersonal psychology with all sorts of questionable material too.

While great caution is required in just how the two fields relate, I think we should definitely have an alliance because of the reality factor. If we, as transpersonal psychologists, do not firmly establish that we are not just studying subjective hallucinations that make us feel better, we are going to continue to be marginalized and rejected by mainstream scientism.

Sometimes I think that up to the present we in transpersonal psychology have decided simply to ignore the fact that we are marginalized and get on, as best we can, with our work and hope for the best. Or we can follow the same path as many parapsychologists by focusing, at least to the mainstream, on the more innocuous aspects of our field in the hope that mainstream science and academic will not notice just how revolutionary our field is. But neither of these strategies will work in the long run: scientism is not going to go away on its own. Scientism is very successful as a belief system: it fills all sorts of psychological needs for creating feelings of knowledge and security.⁵ Scientism implicitly pretends to be genuine science, where there are constant advances, and people generally want to be associated with success. Remember our status issues? Who generally has the greater status—and consequent access to resources to advance her field—a scientist who studies brain processes in

a gleaming laboratory with the latest neuroimaging techniques, or a transpersonal psychologist who listens to stories about mystical experiences while sitting in an office?

We must establish a reality basis for our field if it is to go beyond a fringe movement! Simply allying ourselves with parapsychology is not going to solve any problems in the immediate future, of course, since parapsychology itself is rejected by mainstream scientism. This is a very real situation, in spite of its irrationality. As mentioned earlier, the methodology in parapsychology studies is generally much more rigorous than in any other field of science so rationally parapsychology should be embraced as a model of how to do good science. But the rejection of parapsychology is largely irrational, in that it involves rejection of evidence that is equal or better than accepted data in other social sciences (Tart, 1982).

Since I assume more interaction must happen in the long run, let me give a brief overview of parapsychology as a field to orient transpersonal colleagues. There are several refereed journals in parapsychology, publishing a mix of empirical studies (laboratory experiments and field investigations) and theoretical papers. These journals exist because mainstream journals long ago showed such frequent irrational rejection (well documented) of papers on parapsychology submitted to them that an independent information exchange structure (that vital element of essential science diagrammed in Figure 4) was needed. The oldest, since 1884, is the *Journal of the Society for Psychical Research* (London; <http://www.spr.ac.uk>), next the *Journal of the American Society for Psychical Research* (New York; <http://www.aspr.com/jaspr.htm>), the *Journal of Parapsychology* (founded by J. B. Rhine at Duke University; <http://www.rhine.org>), the *International Journal of Parapsychology* (recently revived after a hiatus. New York; <http://www.parapsychology.org>), and the *European Journal of Parapsychology* (Edinburgh; <http://ejp.org.uk>). While not limited to strictly parapsychological publications, several related journals often carry articles relevant to the field, namely the *Journal of Near-Death Studies* (<http://www.iands.org/journal.html>), the *Journal of Scientific Exploration* (<http://www.jse.com>), and *Subtle Energies and Energy Medicine* (<http://www.issseem.org/journal.html>).

The major professional association is the Parapsychological Association (PA) (<http://www.parapsych.org/>), which has about 300 members in all categories. About 100 of them are full members, meaning they have meaningfully contributed to the professional literature. An advanced degree is also required for full membership. The main function of the PA has been to hold a yearly convention for information exchange of refereed papers, like any professional society, and publish its Proceedings from the convention. As an organized field, parapsychology is smaller than transpersonal psychology, but has been at it for considerably longer and developed a body of rigorous research.

Now let me give some examples of ways in which parapsychology might contribute further to transpersonal psychology, besides its basic “physics” function of showing that at least some transpersonal phenomena might be real.

I have chided my parapsychologist colleagues for many years because they are so anxious for scientific acceptance that they tend to downplay or ignore the

transpersonal implications of the findings of parapsychology and hide behind rigorous methodology and experimental work on low-level effects. They wear white lab coats, have fancy apparatus (when they can afford it) and do complex statistical tests, and so have the external characteristics of accepted sciences. I can understand the strategy, and it would probably be an effective one if the widespread mainstream rejection of parapsychology were only a rational, scientific matter: Let us not frighten conservative scientists with the spiritual implications, but focus on the small-scale stuff until they have moved in an accepting direction. Unfortunately little of this mainstream rejection of parapsychology has to do with rational scientific reasons, as I've discussed elsewhere (Tart, 1982).

To counteract this situation, a few years ago I decided to get some of my more progressive parapsychological colleagues to come out from behind the laboratory bench and write about the transpersonal/spiritual implications of our research. The result was an anthology (Tart, 1997), *Body Mind Spirit: Exploring the Parapsychology of Spirituality*. I will give some brief examples of the kinds of things treated in the various chapters to whet the reader's appetite for ideas on how parapsychology can further contribute to transpersonal psychology.

OBEs (Out-of-Body Experiences)

William Roll contributed a chapter entitled "My Search for the Soul." Writing personally, Roll begins by saying:

I am 16 and living in the small town of Birkerod in Denmark, when my mother dies and my feet are knocked from under me. It is December, 1942, and we are occupied by Nazi Germany. My father is in California, out of reach.

Sometime afterwards, I get up one night and find myself looking at my body which is still on the bed. It is more strange than frightening. I discover I can repeat the experience if I wake up with a peculiar tingly sensation in my chest and face. My consciousness, when I find myself out of the body, is otherwise the same as my ordinary, waking self. There is nothing numinous about these episodes and I never venture into distant places. The farthest I get is the front yard. But the experience is as real as getting up in the morning and going to school. I think this must be what survival is like, a permanently detached soul wandering around the house and yard (p. 50).

This experience led to investigations of parapsychological matters after he finished his education, especially OBEs and postmortem survival, and after many years led him to a concept he calls the *long body* (Roll, 1987), a transpersonal concept about how our true identity is part of a larger group identity, including psychic and spiritual components, not simply our isolated biological self.

EHEs (Exceptional Human Experiences)

Rhea White was another contributor, with her chapter "Exceptional Human Experiences and the Experiential Paradigm." Some transpersonal psychologists are

already familiar with her current work on Exceptional Human Experiences (EHEs). She worked in parapsychology for many years before this, including editing the *Journal of the American Society for Psychical Research*, but eventually decided that the current parapsychological framework was too narrow for what she was seeing about human nature, both her own experiences and that of many others she questioned about unusual experiences. Her website on EHEs (<http://www.ehe.org>) allows her to collect new EHEs and share her collection with others, and provides data to explore the many types and dimensions of EHEs⁶. Many of the EHEs collected are clearly central to transpersonal psychology. As of 2004, she has distinguished dozens of types of transcendent experiences. To illustrate her current thinking, in my introduction to *Body Mind Spirit* I note that:

... Rhea White, reminds us that while the laboratory is the most convenient setting to study reality in, psychic and spiritual experiences happen to real people in real life, and the full range of these exceptional experiences must be kept in mind to fully see the interaction of the psychic and the spiritual. Indeed the category of exceptional human experiences (EHEs) and their transformative power may be more fundamental than divisions like psychic and spiritual, and may lead to a broader conception of what science is than our current, overly masculinized version. White notes that “I cannot define EHEs outside the context of a broad definition of human nature, or as I prefer to say, human being. I think that the most viable aspect of humans is that both as a species and as individuals, no matter when, where, or how long we live, we are unfinished creatures. Moreover, that is not our curse but our glory. I think Keats was correct in saying that earth is ‘a vale for soul-making.’ As transitional creatures, there will always be more for us to grow into and become – more to learn, more to know, more to be, more to share. Everyone’s life aim, then, should be not simply to maintain the status quo, but to expand both inner and outer boundaries. The question each of us must ask, and that only we can answer, is: What is the best way for me to grow? What directions should I take that will enable me to express what I am in the fullest way, given my native talents and my life circumstances?” White enriches these questions by surveying the hidden assumptions of our Western world view that are highlighted and brought into question by exceptional experiences (pp. 26–27).

Parapsychology, Transpersonal Psychology, and Religion

Philosopher and parapsychologist Michael Grosso contributed a chapter on “The Parapsychology of God.” He notes:

Parapsychology, insofar as it confirms the existence of a transcendent psi factor, thus opens up the world of human experience. It does so by re-mythologizing and reenchanting experience with magical and spiritual potencies; at the same time, it gives substantial hints on how even an adventurous skeptic might, in harmony with the free spirit of science, explore the mysteries of godmaking and spirituality. . . . The parapsychology of god, as I conceive it, is not a religion nor is it a branch of science, although it draws upon, and aims in part to synthesize, these traditionally opposed forms of thought. It borrows from religion—from magic, mysticism, and shamanism—its raw transcendent data and poetic power, while

shedding its dogmas, superstitions, tribalism, and absurdities. It borrows from science its detached love of truth, its methods where appropriate, and its evolutionary cosmology, while shedding its conceit and doctrinaire materialism (p. 114).

This would be a good definition of transpersonal psychology in many ways.

Spiritual Virtues

Fortunately there are a few people who have expertise and substantial accomplishments in both parapsychology and transpersonal psychology. William Braud, a prominent transpersonal psychologist as well as parapsychologist, contributed a chapter entitled “Parapsychology and Spirituality: Implications and Intimations.” In the Introduction I noted that Braud:

...drawing on his extensive laboratory research on influencing peoples’ mental and bodily functioning by psi, finds that: “Some years ago, I was amazed and delighted to find that a large number of factors known to facilitate psychic functioning sorted themselves into three clusters that closely matched the three familiar virtues of faith, hope, and love—virtues emphasized in virtually all spiritual traditions.” After analyzing these in more detail, Braud concludes “Parapsychological findings can be useful to those on a spiritual path as they can provide a certain degree of confidence and trust that at least some of the processes and concepts encountered are ‘real’ in a more traditional sense and are not delusions, projections, or misinterpretations. They also can serve to remind us that we are not alone in having exceptional experiences; such experiences are normal, natural, and remarkably widespread.” He is concerned not just with the scientific aspects of psi, though, but with the growth aspects. “But these scientific reassurances, though of value, are only partial: A great deal of what is encountered along the spiritual path is quite beyond the reach of current science. Here, one must be armed with trust, faith, hope, love, discernment, and a tolerance for ambiguity and for contraries, rather than with the feelings of safety, certainty, familiarity, and understanding that science can provide” (pp. 28–29).

Channeling and Revelation

Arthur Hastings is another person with considerable expertise and accomplishment in both parapsychology and transpersonal psychology. His chapter on “Channeling and Spiritual Teaching,” reflects his thinking in our most sophisticated psychological book on channeling, his *With the Tongues of Men and Angels* (Hastings, 1991). As I noted in the Introduction,

One of the claims of religion is revelation: communications from nonmaterial, spiritual beings about the nature of the world and how to live. Inspirational or nonsensical? Arthur Hastings examines the nature of such ostensible entities and their communications, and how we can use them. “The same mixture is true of contemporary channeled messages. In these messages can be found teachings and

inspiration that speak to the spiritual needs of our time and its challenges. In the best of the messages there is an intelligence and perspective that can contribute to social values and personal guidance. But channeling also can express the trivial, fallacious, and pretentious, and be given credence that diverts attention from authentic transpersonal communication. As with many other sources of spiritual teaching, there is a place here for discernment along with open minded consideration” (p. 30).

Spirits and Heaven Realms

I mentioned earlier the possibility of collecting data on whether there are independently existing, “non-physical” spirits. Certainly many transpersonal experiences involve alleged spirit contact. In a chapter entitled “On the Scientific Study of Non-Physical Worlds,” I suggest a basic method of gaining evidence for or against the possibility of independently existing spiritual realms, a related question. Basically we check for correlations among independent observers. If a number of, say, advanced OBE practitioners all practice a certain technique that leads them to a particular non-physical “place,” their accounts show a high correlation with each other, *and* (most importantly) we can be satisfied that these are not semi-arbitrary mental constructions based on similar backgrounds and expectations, this argues strongly for the reality of that place. If their descriptions reflect little but their a priori expectations and background knowledge, on the other hand, the place is likely a fantasy. A similar method could be applied to the question of the independent existence of various spirits. Do independent, unbiased observers report similar observations? We may not gain *certainty* from such studies, but our theories can be based on better evidence.

Survival of Death

As a final example of extending parapsychological findings into the transpersonal area, the late Karlis Osis’ chapter was “Phenomena Suggestive of Life After Death: A Spiritual Existence.” In the Introduction I wrote:

One of the most important, and so emotionally controversial, areas of life is the question of whether our consciousness survives death in some form. This arouses such strong hopes and fears, as well as being an exceptionally difficult area to research, that most parapsychologists avoid it. Yet belief in some form of survival is central to many religions. Parapsychologist Karlis Osis in Chapter 10, *Phenomena Suggestive of Life After Death: A Spiritual Existence*, examines the evidence that there is some kind of survival of consciousness, either as some kind of existence in a non-material realm and/or as reincarnation. Noting the controversial nature of this area, Osis remarks “The neurosciences have lately been admirably successful and useful—except in seeing the limitations of their reach: that part of us which transcends physiological functioning. Nothing stands so clearly in the way of the neurosciences’ overclaims than parapsychological findings on phenomena suggestive of life after death. No wonder it releases passionate debates, even by scholars who are otherwise clear and rational!” And summarizing his review of the evidence for various possibilities of survival, he notes that “Most Americans, regardless of their age or level of education, say they

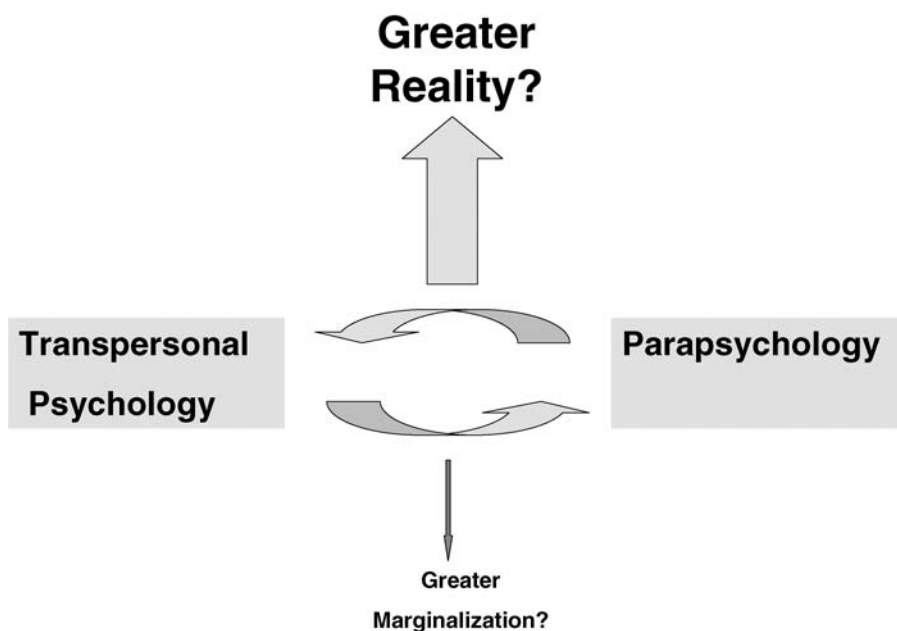


Figure 8. Possible interaction outcomes for transpersonal psychology and parapsychology.

believe in life after death. When death approaches us or our dear ones, the research findings mentioned above [in Osiris chapter] might be useful to these believers and, possibly, to some others, especially if they themselves have experienced phenomena suggestive of afterlife. . . . The spiritual and the psychic have often been pictured as enemies. The animosity between them stems from aberrations in both fields and from not knowing much of each other. At the heart of the matter, they are neighbors and friends, able to help each other” (pp. 29–30).

WHAT SHOULD WE DO?

At the beginning of this essay I mentioned Michael Murphy inviting me to his conference bringing together parapsychologists and UFOlogists. I did decide to attend, as it was a private conference and there would not be any publicity⁷. My personal conclusion is that the connections between parapsychology and transpersonal psychology *must* be made. One of my favorite spiritual sayings, reputed to come from a semi-mythical group (I have no idea whether they really existed), the Sarmouni Brotherhood, is:

There is no God but reality.
To seek Him elsewhere
Is the action
Of the Fall.

I interpret this to mean that to devise any kind of theories and beliefs about the Spirit, or to pursue any kind of spiritual quest that ignores or suppresses knowledge of any part of reality is badly flawed; it is building a house on a foundation of sand. We

need to look seriously and critically at the reality of various transpersonal phenomena, some of which will turn out to be quite subjective (although they may still be psychologically quite important), some of which will have semi- or fully-independent realities and so form a much firmer basis for our field. We can not tiptoe around mainstream science; that is seeking Him elsewhere.

The final question, graphically illustrated in my last figure, shows that I think we need ample interaction between transpersonal psychology and parapsychology, and out of this will arise solid knowledge of a much greater reality available to humans. We will get a parapsychology that is rigorous but much more meaningful and a transpersonal psychology that is meaningful but has a base of more rigorous and scientifically-based findings, making it more effective and discriminative.

Less probable, and so represented by a small arrow, politically speaking there is the possibility of more marginalization of transpersonal psychology. So we need to employ our skills and understandings to provide what was called a minimax solution when I was training to be an engineer at MIT decades ago. We must develop strategies to minimize the harm and marginalization resulting from interaction between the fields, while maximizing the knowledge gain and benefits.

It is going to be an interesting future.

NOTES

¹When I refer to California, I am using a stereotype common in the USA, held partly because the field geographically originated on the West Coast, and partly because California is associated by many with extremes in politics, culture, and belief systems. In fact, transpersonal is not localized, and is represented in Europe, Asia, Australia, and South America as well as North America.

²For many years I have used “pseudo-skeptics” rather than “skeptics” as a more accurate term to describe those who bitterly denounce scientific parapsychology and try to halt research in it. A true skeptic is someone who wants to gain a better understanding of something and is not satisfied with the adequacy of current explanations. A pseudo-skeptic is someone who already knows the Truth that you are wrong and so does not bother to even read, much less evaluate, evidence objectively and scientifically.

³People often credit me, incidentally, with coining the word scientific, but this is incorrect. Sociologists coined it back in the 20s or 30s of the last century when they noticed that people were beginning to take the current ideas of science, the best theories of the time, and treat them as if they were Revealed Truths, the Final Answers on things.

⁴I deliberately state it strongly this way, as I think those who deny the existence of these phenomena are generally being unreasonable and scientific.

⁵For some, scientism may also provide plausible rationalization for human greed and exploitation of others (they are just biochemical machines with no inherent purpose, after all).

⁶Amusingly, Rhea White has incurred and suffered from the same kind of “semantic karma” I created when I coined the acronym for out-of-body experiences. People pronounce it in speech like it was a word and tell me about their obes (rhymes with Ooh, bees!), and tell White about their ehes (rhymes with tee hees).

⁷I even went to a second one some years later, at Esalen. During that conference, while I was in the baths between sessions, someone stole my pants. This struck me as powerfully symbolic of something, but I’m not sure what...

REFERENCES

- BLACKBURN, S. (2004, 11–17 September). The world in your head. *New Scientist*, 42–45.
- GRAD, B. (1965). Some biological effects of the ‘laying on of hands’: A review of experiments with animals and plants. *Journal of the American Society for Psychical Research*, 59, 95–127.

- HASTINGS, A. (1991). *With the tongues of men and angels: A study of channeling*. Chicago: Holt, Rinehart & Winston.
- HESS, D. (1992). Disciplining heterodoxy, circumventing discipline: Parapsychology, anthropologically. *Knowledge and Society: The Anthropology of Science and Technology*, 9, 223–252.
- ROLL, W. (1987). Memory and the long body. *Theta*, 15, 10–29.
- SHELDRAKE, R. (1998). Experimenter effects in scientific research: How widely are they neglected? *Journal of Scientific Exploration*, 12, 73–78.
- TART, C. T. (1982). The controversy about psi: Two psychological theories. *Journal of Parapsychology*, 46, 313–320.
- TART, C. T. (Ed.). (1997). *Body mind spirit: Exploring the parapsychology of spirituality*. Charlottesville, Virginia: Hampton Roads.
- TART, C. T. (1999). On the scientific study of non-physical worlds. In C. C. D. Lorimer, J. Cosh, M. Payne & A. Mayne (Eds.), *Wider horizons: Explorations in science and human experience* (pp. 221–228). Gibleston Mill, Colinsburgh, Leven, Fife, Scotland: Scientific and Medical Network.
- TART, C. T. (2001a). *Mind science: Meditation training for practical people*. Novato, California: Wisdom Editions.
- TART, C. T. (2001b). Parapsychology & transpersonal psychology: “Anomalies” to be explained away or spirit to manifest? *Journal of Parapsychology*, 66, 31–47.
- TART, C. T. (2003). Spiritual motivations of parapsychologists? Empirical data. *Journal of Parapsychology*, 67, 181–184.
- WATT, C., & NAGTEGAAL, M. (2004). Reporting of blind methods: An interdisciplinary survey. *Journal of the Society for Psychological Research*, 68(875)[2], 105–114.

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