Chapter 3

TRANSPERSONAL SENSATION AND PERCEPTION

Learning Objectives

1. Distinguish between sensation and perception.
2. Define "synesthesia" and tell why this cross-sensory modality points to an original "unity of the senses."
3. Describe how sensory information is process from receptor to brain.
4. Explain how sensation involves a change in the stimulus.
5. Explain how sensation involves a change in the perceiver.
6. Explain how sensation depends on the brain, and not on the outer senses.
7. Describe the key features and characteristics of phantom limb phenomena.
8. Explain why phantom limb provides evidence that sensation depends more on the brain than one the physical senses.
9. Describe how the outer senses are limited in their perception of the real world.
10. Evaluate the implications for empirical psychology of a method of knowing that depends upon the physical senses.
11. Illustrate how action, change, and distortion characterize the nature of all sensory processes.
12. Explain how the physical senses actualize aspects of reality that otherwise exist as potential experience.
13. Explain why the physical environment appears as it does because of one's physiological structure.
14. Illustrate how physical reality does not possess the sensory qualities that the perceiver usually attributes to it.
15. Give examples of how various physical organisms react to react to a highly specific but limited field of stimulus energy that constrains what they can know of physical reality.
16. Tell how the physical senses force us to perceive an available field of energy in physical terms.
17. Evaluate and judge the value of a sensory-based psychology to study psychological intangibles such as a thought, an emotion, or a dream.
18. Describe four characteristics of perception.
19. Give two examples of how perceptions are structured in ways that sensory stimulation is not.
20. Identify some of the discrepancies that exist between so-called objective physical objects and subjective perception of those objects.
21. Tell how perception is context-dependent and give two examples.
22. Explain why interpretation is an intrinsic feature of perception.
23. Debate whether there can be perception without sensation.
24. Identify three reasons why parapsychology is a concern for students of general psychology.
25. Evaluate the argument that people who believe "weird" things are irrational, foolish, and stupid.
26. Evaluate and judge the accuracy of the claim that a reproducible ESP phenomenon has never been discovered.
27. Evaluate and judge the accuracy of the claim that parapsychology is a viable research area in science.
28. Identify five reasons why the controversy continues about whether ESP exists
29. Give four examples of the "best evidence" for the reality of psi functioning.
30. Tell how the philosophy of sensationalism and materialism prejudice perception of the scientific evidence for the existence of psi functioning.
31. Tell how a bias toward disbelief operates in the those who deny the scientific truth of psychic phenomena.
32. Explain how psi functioning can be considered a "sixth" sense.
33. Describe how psi perception is understandable in terms of modern physical theory.
34. Describe the purposes of "Inner Senses" hypothesized by channel Jane Roberts.
35. Tell how psi functioning is an example of a "white crow."
36. Describe the story of the apparitions at Medjugorje from their beginning to the present time.
37. Describe the sociological impact of the apparitions at Medjugorje.
38. Describe the scientific investigations that have been conducted about the apparitions at Medjugorje.
39. Explain why the Roman Catholic Church is skeptical about the apparitions and why believers are so convinced of the apparitions' authenticity?

40. List the three main questions that the apparitions at Medjugorje pose for any psychologist interested in religious issues.

41. Describe the limitations of more conventional and established ways of treating apparitions and their "either/or" (physically real or not real at all) approaches to unusual phenomena.

42. Suggest a broader framework for what is "real" and for ways of apprehending certain more unusual forms of reality.

43. Suggest a particular model for psychological processes that might underlie the Medjugorje and other religious apparitions.

44. Describe the explanation of the Medjugorje apparitions by means of the model based on the critical realist perspective of John Hick.

45. Describe the explanation of the Medjugorje apparitions by means of the model based on the Aspect Psychology framework of Jane Roberts.

46. Discuss the ontological and epistemological issues relevant to apparitions.

47. Explain why there is a need for new research and investigatory methods that might be more appropriate for the study of exceptional experiences such as apparitions.
CHAPTER 3 – Transpersonal Sensation and Perception

Chapter Outline

TRANSPERSONAL SENSATION AND PERCEPTION

I. Sensation and Perception: Detecting and Encoding, Organizing and Interpreting Sensory Information

A. Characteristics of Sensation
   1. How does sensation differ from perception?
   2. Synesthesia -- The original unity of the senses.
   3. How sensory information is processed
      a. Every act of sensation involves a change in the stimulus.
      b. Every act of sensation involves a change in the perceiver.
      c. Every act of sensation depends on the brain, not on the outer senses.
   4. Phantom limb phenomena.

B. Sensory Limitations and the Real World - Implications for Empirical Psychology
   1. Action, change, and distortion characterize the nature of sensory processes.
   2. Physical senses actualize aspects of reality that otherwise only exist as potential experience.
   3. The physical environment appears as it does because of our own physiological structure.
   4. Physical reality does not possess the sensory qualities that we attribute to them.
   5. Physical senses react to a highly specific but limited field of stimulus energy that constrains what we can know of physical reality.
   6. The physical senses force us to perceive an available field of energy in physical terms, imposing a highly specialized pattern upon this field of reality.
   7. A sensory-based psychology is ill-equipped to study psychological intangibles that are nevertheless real.

C. Characteristics of Perception
   1. Perceptions are structured in ways that sensory stimulation are not.
   2. Discrepancies exist between objective physical objects and subjective perceptions.
   3. Perception is context-dependent.
   4. Interpretation is an intrinsic feature of perception.

II. Can There Be Perception Without Sensation?

A. Why Psi Phenomena is a Transpersonal Concern
   1. The world beyond the five senses.
   2. The parapsychology of spirituality.
   3. Psi experiences are normal, natural, and remarkably widespread.

B. What the Skeptics Claim and Why It Just Ain't So
   1. Are people who believe “weird” things irrational, foolish, and stupid?
   2. Is it true that a reproducible ESP phenomenon has never been discovered?
      a. How psi works: Some interesting research findings.
3. Is it true that parapsychology is not a viable research area in science?  
   a. Psi-related topics in master’s theses and doctoral dissertations.

C. Why the Controversy Continues
   1. Lack of familiarity with the quantitative and qualitative evidence for psi functioning.
   2. Overlook or ignore the "best evidence" for the reality of psi functioning.
   3. Prejudiced perception caused by philosophy of sensationalism and materialism.
   4. Selective reporting of psi research.
   5. A bias toward unbelief.

D. Psi Functioning as an Example of an "Inner Sense"
   1. A "sixth" perceptual modality.
   2. Psi perception is understandable in terms of modern physical theory.
   3. Physical senses as extensions of "Inner Senses."
   4. Another instance of William James's "white crow."

III. Transpersonal Sensation and Perception in Action: Apparitions at Medjugorje

A. The Phenomenon, Its Social Impact, the Scientific Studies, and the Church
   1. A brief description of the phenomena that began in June 24, 1981.
   2. The apparition's sociological impact.
   3. Scientific investigations conducted about the phenomenon.
   4. Roman Catholic Church's position regarding the Marian apparitions.

B. Examining Psychological Processes in Religious "Visions" and "Apparitions."
   1. Key Questions Concerning the Apparitions
      a. Is something "supernatural" and "miraculous" happening at Medjugorje or is it "one of the most subversive hoaxes in the history of the Catholic Church"?
      b. Are the Marian apparitions and Messages at Medjugorje solely the product of the psyche of the six percipients or is some actual transcendental reality producing them?
      c. Can a science of psychology be expected to investigate or interpret with any success this or any other manifestations of inner reality unperceived by the physical senses and that is labeled "miraculous" or "supernatural," or is such a project simply beyond the reach of psychology's existing theories and concepts, linguistic frameworks and philosophic assumptions, subject matter and methods of inquiry?
   2. Limitations of more conventional and established ways of treating apparitions and their "either/or" (physically real or not real at all) approaches to unusual phenomena.
   3. Psychology for the 21st century.
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4. Different tools are required for the task of exploring and interpreting these unconscious sources, other dimensions, and deeper realities of physical life

C. A Critical-Realism-Aspect Psychology Framework
   1. Example of Julian of Norwich's visions of Christ.
   2. An inner and an outer order of events.

D. How Can the Apparitions Be True and Not True?
   1. The role of imaginative abilities in construction of perceived reality.
   2. Religious dynamism of Marian apparitions.
   3. The error of making symbolic personifications literal.
The chapter begins by distinguishing sensation from perception and describing the physical nature of sensation. Sensation is the process by which physical stimulus energy is detected and encoded. Perception is the process of organizing and interpreting these raw, unanalyzed, pre-categorical sensations so that we can experience an identifiable and meaningful object or event. The phenomenon of synesthesia points to the original unity of the senses. Before our sensory organs can transmit stimulus information to the brain, specialized sensory receptors first change the various forms of stimulus energies (e.g., electromagnetic waves, pressure changes in the air, pressure, stretching, vibration, gaseous molecules, and soluble molecules) into a common form of energy (i.e., electrochemical) that our nervous system can handle and interpret. Each set of specialized receptor in that sense acts as a living “transducer” that changes one form of energy into a different kind of energy. Every receptor, when it is activated, is itself also changed. Our neurological structures are altered by the information that passes through them. In fact, this is what sensation is – an alteration of neurological structure. Any sensation instantly alters the electrical-chemical and neurological systems of the perceiver. Every act of sensation (and perception) changes the perceiver. What, then, makes the difference in our perceptual experience if stimulus energies are all “transduced” into the same form of electrochemical energy? The location in the brain to which the message-impulses are carried. Each sensory receiving area of the cortex “knows how” to convert the electrochemical neural impulses into the “right experience.” The phantom limb phenomenon (a limb is experienced in the place where the amputated limb used to be) is a dramatic example that shows how sensation and perception depends on the events in the brain rather than on the sensory input itself.

Physical sensation is a limited and narrow channel of information about the world. We are aware of physical reality only insofar as it impinges upon our sensory receptors. We react to a highly specific but limited field of energy and information. What lies outside of that sensation (and perception) remains unknown to us. Our sensory receptors simply do not allow us to tune into their ranges. Our physical senses are equipped only to sense and perceive realities within the physical system. We ignore non-physical data. Any event or action that we perceive is thus only a portion of the true dimensionality of that event. We construct sensations consistent with the physical senses we happen to have. Other species of animals have specialized sensory modalities that permit them to focus on fields of energy that are not picked up human physical senses. The observation that the “picture” of the physical environment that is perceived depends on the sensory systems was a part of early physiological discoveries in the history of modern psychology made by German physiologist Johannes Muller (1801-1858) in the 19th century.

The process of perception makes important contribution to sensory information. Our perceptions are structured in ways that sensory stimulation is not. Max Wertheimer (1880-1943), one of the founders of Gestalt Psychology, demonstrated that our perceptions are different from the sensations that comprise them. structured in ways that sensory stimulation is not. Sensory and perceptual systems are highly discriminating, accepting certain stimulus qualities and features, intensities and frequencies, while ignoring others, making a pattern of them follow Gestalt laws of perceptual organization. What is perceived is always a function of a transduced physical stimulus, an altered nervous system, and the activation of specific areas of the cortex - not of the external objects or events that produce these changes. The physical environment appears as it does to us because of our own physiological structure. Our sensations are “lovely liars” and the perceptions that result from them are not images of an external world but “signs” and “symbols” that need to be interpreted. Interpretation is an intrinsic feature of perception. The perceiver always makes an active contribution to the perceived. Sensations, the raw elements of conscious experience become meaningful only when associated with previous experiences. We organize our perceptions through our ideas. Much of what we take to be perceptions naively given to us by our senses, are actually creations and translations, constructions and interpretations of our physical senses and conscious mind. Perception is context dependent. The same physical stimulus can give rise to different
perceptions depending on the context in which it is observed and interpreted. Change the context of an event or action, and you change its meaning, and by changing the meaning, you change your response to the event as well.

The chapter continues with a discussion of why paranormal phenomena are a concern to students of general psychology and the scientific truth of psychic phenomena is examined. One reason for students of general psychology to pay attention to paranormal events is the very nature of psi phenomena. Transpersonal psychology is interested in understanding and helping to facilitate those experiences and behaviors in which personality functioning extends beyond (or “trans”) ordinary ego-directed waking consciousness to bring into awareness aspects of reality that exist beyond yet within the world of the five senses, and so is the science of parapsychology. A second reason for students of general psychology to pay attention to evidence of the human mind’s occasional abilities to transcend time and space is the interface that parapsychology provides between science and religion. A third reason to pay attention to paranormal phenomena is that such experiences are normal, natural, and remarkably widespread.

So-called skeptics and debunkers of parapsychological claims usually assert that people who believe in the existence of psi phenomena are illogical, less intelligent, irrational, credulous, uncritical, foolish, sloppy thinkers, and prone to external locus of control. The fact of the matter is that the list of people who have spent time studying the evidence for psi for themselves, and who have given testimony to the genuineness of paranormal events include some of the most respected, intelligent, and well-known people of our culture – many Nobel-prize winning scientists, authors, inventors, philosophers, military leaders, psychologists, astronauts, and business people. Most introductory psychology textbook authors write as if parapsychological phenomenon is not a real possibility, that its existence remains a mere “hypothesis,” that evidence for ESP is “shaky,” that “there has yet to be a reliable demonstration that any form of ESP actually exists,” and that its study borders on “pseudoscience.” Scientists who are thoroughly familiar with all of the data across laboratories present a far different representation of the facts. There are well over a thousand published, high-quality, scientific experiments which show beyond any reasonable scientific doubt the existence of four psychic abilities – telepathy, clairvoyance, precognition, psychokinesis. Well-known scientific journals have published articles favorably reviewing the body of evidence for psychic functioning. Parapsychological-related studies have been published in a wide range of peer-reviewed journals. Psi-related topics are investigated in numerous master’s theses and doctoral dissertations. Based on meta-analyses of more than a thousand experiments investigating various forms of telepathy, clairvoyance, precognition, psychic healing, and psychokinesis, the evidence seen in these experiments are genuinely replicable.

Why does the controversy continue in mainstream psychology? Coverage of psi research in introductory psychology and critical thinking textbooks generally reflect the discipline’s lack of familiarity with the field of parapsychology. General psychology textbooks' coverage of the topic presents an outdated and grossly misleading view of parapsychology and do not present the latest developments in psi research. Because paranormal phenomena do not easily fit the dominant philosophy of reality (materialism) and philosophy of knowing (sensationalism) that underlies mainstream psychology, many psychologists refuse to even examine the evidence first-hand. Psychologists have difficulty dealing with anomalies that exist outside their current scientific paradigm. Insofar as psychology students and their professors are guided by flawed descriptions of parapsychology in general psychology textbooks, they are prevented from gaining an accurate understanding of the massive amounts of scientific evidence collected over a century by many different researchers. Wishful thinking and self-deception hampers the thinking of many academics when it comes to psi functioning. Skeptics love skepticism unless skepticism is applied to skeptics’ claims, but this is precisely what must be done when one encounters such universal, dogmatic proclamations as “No evidence exists or has ever existed for ESP.”
The outer, physical senses can be understood as extensions of inner, nonphysical senses. The outer senses are designed to give us reliable and accurate information about the “objective” physical world that is in three-dimensional space in present time. Perception, using the inner senses, produces knowledge of events that transcend space and time, and includes so-called “paranormal” or psi phenomena of telepathy, clairvoyance, precognition and retrocognition. Our inner senses are also used during dreams, in out-of-body and near-death experiences, and in other projections of consciousness.

The chapter concludes with an examination of an example of transpersonal sensation and perception in the form of the Marian apparitions at Medjugorje based on the critical realist perspective of philosopher-theologian John Hick and the Aspect Psychology of mystic and writer Jane Roberts. A brief overview of the events tied to Medjugorje is presented and several key questions are addressed regarding the epistemological and ontological issues which confront the psychologist interested in any religious phenomenon that suggests the existence of actual transcendental realities. For the sake of argument, the independent reality of the apparitions is affirmed (noema) while also acknowledging the participatory role of human consciousness in its manifestation (noesis). A brief discussion of what it would mean if the apparitions did not occur as a matter of so-called historical fact follows.
I. SENSATION AND PERCEPTION: DETECTING, ENCODING, ORGANIZING, & INTERPRETING SENSORY INFORMATION

Inasmuch as an empirical psychology is based on observation and psychologists must see what they are looking for, mainstream psychology’s knowledge of human experience and behavior is dependent on the physical senses. Introductory psychology textbooks generally present the five physical senses (sight, sound, smell, taste, and feeling) as perceptive organs that enable the individual to experience the environment and world, people and other animals, objects and events -- reality, in other words -- that is already out there now as it really is. The physical senses, however, are quite limited and in a certain sense can be regarded as inhibitors of perception that detect and encode only stimuli that falls within a certain range of frequencies that the physical senses are constructed to notice and be aware of. What falls outside their range is psychologically invisible, limiting for all practical and imaginative purposes what the individual might otherwise perceive. From the perspective of transpersonal psychology, there is always more to reality -- physical and psychological -- than the physical senses or its instruments can show.

Characteristics of Sensation

How does sensation differ from perception? Sensation is the process by which physical energy (e.g., electromagnetic waves, sound waves, chemical molecules, tactile pressure) is detected and transformed into electrochemical energy by the various sensory receptors, enabling the physical organism to notice and be aware of objects and events in the physical world. The stimulus energy is initially unassociated with anything meaningful and exists in what is called a raw, unanalyzed, ambiguous, pre-categorical form. All we might see at this stage, for example, is a "small white moving shape." Perception takes up where sensation leaves off. Perception is the process of organizing and interpreting these raw, unanalyzed, ambiguous, pre-categorical sensations so that we experience not just size, color, motion, and form, but an identifiable, recognizable, familiar, and meaningful object (e.g., "It's a baseball"). The mind -- having existence within the scope of physical matter by its connection with the material brain but independent of it -- organizes and interprets the sensations into perceptions according to the individual self's unique perspective, memories, concepts, expectations, prior knowledge, beliefs, purposes, and intent (called "top-down" processing) (Matlin, 2005, p. 45). The brain -- the very small portion of the mind which appears within matter -- then reacts and signals the physical organism via efferent (outgoing motor) nerve pathways to act in response.

Synesthesia - The original unity of the outer senses. There is a doctrine in sensory psychology first formulated by physiologist Johannes Muller (1801-1858) called the "Doctrine of Specific Nerve Energies." It states that

there are five types of sensory nerves, each containing a characteristic energy, and that when they [are] stimulated a characteristic sensation results. In other words, each nerve responds in its own characteristic way, no matter how it is stimulated. For example, stimulating the eye with light waves, electricity, pressure, or by a blow on the head will all cause visual sensations. (Hergenhahn, 2005, p. 214)

This doctrine implies that the outer senses fundamentally operates in isolation from one another, and that the phenomenon called synesthesia ought not to exist. Synesthesia (from the Greek, syn, together + aisthanesthai, to perceive) refers to the relatively rare experience in adults in which "stimulation of one [sensory] modality leads to perceptual experience in another" (Goldstein, 2002, p. 368). Synesthesia calls attention to the body's potentiality, ideally speaking, for perceiving stimuli on a generalized basis -- its capacity to see through the sense of smell, hear through the sense of sight, feel through the sense of hearing, and so forth. This cross-sense unity is represented in the experience of a person who describes "seeing" color or shapes when listening to music (Karwoski & Odbert, 1938; Karwoski, Odbert, &
Osgood, 1942). It is represented in the cross-sensory experience expressed in the line of poetry written by the 19th century poet Keats, "Taste the music of that pale vision" (Ullman, 1959). Sound can be felt or seen as well as heard, likely due to interactions among brain areas (Paulesu, et al., 1995).

There is an important general significance to these strange goings-on. . . . Sensory experience must have a primary unity that precedes its division into separate senses. . . . Synesthetic experiences suggest that each person constructs a single world from many different points of view and that this world, once achieved, always remains an open project requiring a never-ending integration of what the various senses tell us about it. . . . Each sense initially is part of a unity that includes all others, and it is only the emergence of an abstract, adult point of view that gives us separate senses. . . . Synesthetic experience clearly presents the case for the preabstract unity of our senses and thus helps us see why a nonmechanical view of the human body is so important for understanding all psychological processes, perceiving included. (Pollio, 1982, p. 80)

Colors may be seen, tasted, sniffed, experienced to possess either kinesthetic stability or instability, or associated with particular sounds (e.g., light colors with high sounds and dark colors with low sounds) (Marks, 1974, 1975). Any given color, in these terms, can be subconsciously appreciated through all the five senses, adding up to the individual's perception of a given color. A color emotion may even be caused by emotions. Color associations to the emotions of anger and fear have been found to exist cross-culturally (Hupka, Zalenski, Otto, Reidl, & Tarabrina, 1997). Emotions themselves have a chemical reaction which can be sniffed by other animals. From an individual's odor, an animal can instantly build up an image of the state of the individual's emotional state.

This potentiality of the human sensory systems to hear through any given portion of the skin or to see through the sense of smell can be found actually operative in other animals species who utilize some of these methods to perceive other animals in their environment. Many animals, for example, quite literally see the sight of another animal through the use of the sense of smell, building up through countless variation of odors and scents the likeness of the body of another animal complete in its translations as to its shape, size and weight that is every bit are real as the visual image (Sinclair, 1985). The outer senses can lose their separate identities during altered states of consciousness induced by drugs such as LSD, mescaline, and psilocybin which have been reported to produce synthetic experiences (Huxley, 1963; Watts, 1962). The experience of unity among the senses is very frequent in children and uncommon for most adults. "Newborns ride on intermingling waves of sight, sound, touch, taste, and especially, smell. . . . In time, the newborn learns to sort and tame all its sensory impressions, some of which have names, many of which will remain nameless to the ends of its days" (Ackerman, 1990, p. 289).

[The world of the newborn] smells to him much as our world smells to us, but he does not perceive odors as coming through his nose alone. He hears odors, and sees odors, and feels them too. His world is a melee of pungent aromas -- and pungent sounds, and bitter-smelling sounds, and sweet-smelling sights, and sour-smelling pressures against the skin. If we could visit the newborn's world, we would think ourselves inside a hallucinogenic perfumery (D. Maurer & C. Maurer, quoted in Ackerman, 1990, p. 289)

This observation suggests that differentiation among the senses is part of a learning process during human development that conditions us to translate a given stimuli into data that will be detected by a specific physical sense (Werner, 1948), but which originally were able to be perceived on a generalized basis by any given physical sense -- a potentiality for transpersonal sensation and perception that remains part of the human heritage but is currently overlooked in human development.
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How Sensory Information is Processed

Every act of sensation involves a change in the stimulus. The physical organism detects physical energy through specialized cells called receptors that are located in its outer sense organs (eyes, ears, nose, tongue, skin), which contain receptors. Various sensory stimuli entering these sensory receptors (e.g., electromagnetic waves, pressure changes in the air, pressure, stretching, vibration, gaseous molecules, and soluble molecules), by the very act of entry, become transformed into the sort of data (i.e., electrochemical) that can be accepted by the given receptor. Each specialized receptor acts as a “transducer” that changes one form of energy into a different kind of energy -- like a light bulb that converts electricity into light, the Geiger counter that translates radiation into sound, the car battery that changes chemical energy into electrical energy, the hot plate that transforms electrical energy into thermal energy, the nuclear power plant that turns thermal energy into electrical energy, the tape recorder that modifies air waves into electrical impulses which are altered into magnetic lines of force stored in the oxides of the tape. Each of our senses is a living transducer translating unknowable physical realities (electromagnetic energy, vibrating air waves, frequencies of mechanical stimulation, gas and liquid atoms and molecules) from one framework into other knowable terms (light and dark colors, size, shape, loudness, pitch, timbre, hot, cold, pressure, stretching, vibration, pungent, acrid, salty, sour, sweet, bitter) (Christian, 1977, chap. 3).

The important point is that physical sensation must be shaped into a certain form if our physical organism is to become aware of it at all. Sensory "input" in the form of many different physical energies must be translated and transformed by the physical senses that detect and encode them into a form of energy or "output" that the nervous system can handle (i.e., neural energy). The stimulus is itself altered and modified by the act of sensation, in other words. Sensation is an action that changes and to a certain extent distorts what is perceived.

Every act of sensation involves a change in the perceiver. Not only is the stimulus changed, but the receptor is itself changed by the action of receiving the stimulus. During visual transduction (i.e., the transformation of electromagnetic energy into electrochemical energy), the retinal cell absorbs one photon of light (the smallest possible packet of light energy), which activates its visual pigment molecules causing it to change its shape, a process called isomerization. This action in turn triggers a sequence of events referred to an enzyme cascade whereby each visual pigment molecule activates hundreds more which, in turn, activates thousands more, and so forth leading to the generation of an electrical signal in the receptor (Goldstein, 2002). Similar descriptions apply to the other outer senses -- auditory, olfactory, gustatory, and cutaneous.

The important point is that the outer senses are themselves changed by the stimulus energies that they detect and encode. The neurological structure is also altered by the information that passes through it, as neurons transmit these electric signals along their axons by the process of electron charge exchange and convey neural impulses across synapses by releasing inhibitory and excitatory neurotransmitters. This is what sensation is: an alteration of neurological structure. Every sensation instantly alters the electrical-chemical and neurological systems of the perceiver.

Sensation depends on the brain, not on the outer senses. How does one tell whether one is seeing, hearing, smelling, tasting, or touching if the many and varied stimulus energies are all transduced into the same form of electrochemical neural energy? It is the location in the brain to which the neural impulses are conveyed that makes the difference in our sensory experience (Soderquist, 2002). Consider the pathways that the various outer senses must use in order to transmit their sensory information to the brain.
• **Visual sensory modality.** Visual receptors -- rods and cones -- in the eye convey impulses via the optic nerve to the “visual receiving areas” of the lateral geniculate nucleus (LGN) located in the thalamus, then to the striate cortex in the occipital lobe, and finally to the extrastriate cortex in the parietal and temporal lobes of the brain (Goldstein, 2002, pp. 94, 110)

• **Auditory sensory modality.** Stimulation of auditory receptors -- the inner and outer hair cells of the cochlea -- located in the inner ear releases a chemical transmitter that generates the electrical signal that is conveyed along fibers in the auditory nerve from the cochlea to the bilateral “auditory receiving areas” -- the Superior Olivary Nucleus in the brain stem, the Inferior Colliculus of the midbrain, and the Medial Geniculate nucleus of the thalamus -- located on both the left and right sides of the temporal lobe of the brain (Goldstein, 2002, p. 350).

• **Olfactory sensory modality.** The stimulation by odorants of the 1,000 different kinds of olfactory receptors (ORs) on the cilia of the 10 million olfactory receptor neurons (ORNs) in the olfactory mucosa of the nose triggers a series of reactions that result an electrical signal that is conducted along the axons of the ORNs to the glomeruli (small round structures) in the olfactory bulb. Nerve impulses are then transmitted from the glomeruli to the “olfactory receiving areas” -- the primary olfactory cortex or piriform cortex, a small area under the temporal lobe, and the secondary olfactory cortex, or orbitofrontal cortex, located in the frontal lobe, near the eyes. The nerve impulses are also relayed to the amygdala, a structure deep in the limbic system that is involved in emotional responding (Goldstein, 2002, p. 482)

• **Gustatory sensory modality.** When receptor sites on the tongue -- taste cells contained in the taste buds of four different types of papillae or ridges and valleys on the tongue -- are stimulated by bitter, sour, salty, or sweet substances, a number of different chemical reactions within the taste cell creates an electrical signal that is transmitted via the vagus nerve to the nucleus of the solitary tract (NST) in the brain stem. The nerve impulse is then conveyed to the thalamus (a nucleus in the brain), and then to “gustatory receiving areas” -- the insula and the frontal operculum cortex, that are partially hidden behind the temporary lobe, and the orbital frontal cortex, which also receives olfactory signals (Goldstein, 2002, p. 489). Note that there is no taste to chemical substances; they are only molecular structures. The sourness is not in the lemon, for instance, but a function of the transducers that are stimulated on the tongue and the regions of the “gustatory receiving areas” that are activated. The molecular structure of a chemical substance in itself is sourless.

• **Cutaneous modality.** Stimulation of nerve fibers from "mechanoreceptors" (Merkel discs, Meissner corpuscles, Ruffini cylinders, and Pacinian corpuscles", "thermoreceptors" (warm and cold fibers), and "nociceptors" (pain fibers) located in the skin travel along bundles of peripheral nerves that enter the spinal cord through the dorsal root via the medial lemniscal pathway. Sensory (afferent) nerve impulses then travel up the spinothalamic pathway to the thalamus, then to the “somatosensory receiving area” in the parietal lobe of the cortex and a number of subcortical structures, including the anterior cingulated cortex, the hypothalamus and the limbic system (Goldstein, 2002, pp. 446-447, 461).

Each sensory receiving area of the brain knows how to convert its own electro-chemical neural impulses into the “right” experience.

The outer senses – eyes, ears, nose, tongue, skin – are not really perceptual organs -- the brain is. Human and nonhuman animals who have the nerves severed that connect the various sensory receptors to the brain can no longer see, hear, feel, smell, or taste even though their outer senses are intact. This means that it is the brain connected to the mind that decides what these sensations mean and represent. In a very literal sense, beauty is not in the eye of the beholder; it is in the brain which is the organ of perception. Examine your experience of color. The energy input to your visual transducers is uncolored electromagnetic radiation that enters your eyes with wavelengths between 400 to 700 nanometers. Your
transducer cones identify the various wavelengths and send electrical messages along the neural pathways to the visual receiving areas of the brain. There and then only do you see color. Color, like pain, is an experience in your mind. It is the experiential finale to a long and complicated process of change in the stimulus and change in the perceiver.

**Phantom limb phenomena.** The phantom limb phenomenon (i.e., a limb is experienced in the place where the amputated limb used to be) is a good example of how sensation and perception depends on the events in the brain rather than on the sensory input itself. Amputation of a limb removes the sensory receptors that produce the tactile and kinesthetic afferent impulses that ordinarily lead to the usual experience of having a limb. Despite the removal of the physical basis for experiencing the body part, however, phantom limb is a common experience for amputees (Melzack & Wall, 1982). The proportion of amputees who experience phantom limb pain ranges from a low of 13% to a high of 71% depending on the age of the amputee, the passage of time, and the suddenness of the amputation (Loeser, 1990). Phantom limb endures long after the injured tissues have healed, even when the stump itself is perfectly formed and not painful or sensitive.

Interestingly, there are “trigger points” on other parts of the body that, when touched, produce intense pain in the phantom limb (e.g., a touch on the head or the opposite healthy limb). Phantom limb pain can occur spontaneously, or triggered by vibration or light touches which are too weak to stimulate ordinary pain receptors. Pain persists even when the dorsal roots in the spinal column that relay all afferent (incoming) sensory information from the peripheral nerves to the brain are cut. For instance, a person, after such an operation can feel nothing from his shoulders to his navel, but the pain may persist in his phantom fingers, sharp as ever. Traditional theories of pain say that pain results from the stimulation of pain receptors in the skin. But how do you find pain receptors in a foot that is not there, or in the trigger points on the opposite healthy leg, or in the severed specialized nerve fibers that carry this kind of pain to the brain? Pain, in this sense, is an experience of the mind.

**Sensory Limitations and the Real World - Implications for Empirical Psychology**

**Action, change, and distortion characterize the nature of sensory processes.** Action and change, and distortion characterizes human sensation from the very beginning of the sensory process. Stimulus energies change that upon which they act and in doing so are themselves changed by the medium through which they are detected and encoded. Sensory processes automatically alter incoming stimulus energies from one form to another, while simultaneously altering the electromagnetic and neurological structure of the perceiver. In fact, multitudinous reactions occur throughout the physical organism -- physiological, neurological, immunological, endocrine, respiratory, metabolic, chemical, electrical, and so forth -- in response to stimulus energies that influence (and are influenced by) the physical organism as it moves about in the physical environment. The sensory and neurological systems of the perceiver change and are changed by that which they perceive. Any perception instantly changes the perceiver, and the thing perceived. The perceiver and the object perceived are part of the same action, each changing the other. Sensory information subsequently becomes a part of the nervous system’s structure, automatically blending with, intermingling with, and enmeshed with the entire neurological structure of the personality. Nothing is neutral or "objective" in these terms. We are speaking here of the physical nature of any sensation.

**Physical senses actualize aspects of reality that otherwise exist only as potential experience.** Hermann von Helmholtz (1821-1894), “one of the greatest scientists of the 19th century” (Schultz & Schultz, 2004, p. 73), recognized the sensory fact that our physical senses actualize aspects of reality that otherwise exist only as potential experience. Individuals who were color blind and lacked one or more receptor systems corresponding to primary colors (red, green, blue-violet) would not be able to sense certain colors, even though the so-called objective stimulus itself had not changed. Three operational
color receptors on the retina are required in order to actualize aspects of the physical world that otherwise exist only as potential experience.

The physical environment appears as it does to us because of our own physiological structure. In his work on vision, Helmholtz discovered that the same psychological sensation (color) is produced by different physical events (wavelengths). Different physical events (different wavelengths) do not produce different psychological sensations (different color experiences). The sensation of the color “yellow,” for instance, produced by a single wavelength (575-590 nm) results in the same subjective color experience as presenting the combination of red (620-700 nm) and green (500-575 nm) wavelengths. These observations led him to conclude that the sensation of color is in the observer and not merely a function of the wavelengths themselves.

The colors that we see in response to different wavelengths are not contained in the rays of light themselves. Instead, colors are created by our perceptual system, and, although specific colors are related to specific wavelengths, the connection between wavelength and the experience we call “color” is an arbitrary one. There is nothing intrinsically “blue” about short wavelengths or “red” about long wavelengths. In fact, the light rays are simple energy that has no color at all. Looked at it this way, color is not a property of wavelength but is the brain’s way of letting us know what wavelengths are present. (Goldstein, 2002, p. 205)

Sensation and creation are far more intimately connected than mainstream psychology recognizes. In a very real manner, our physical senses “manufacture” the reality that they perceive (Christian, 1977, p. 194). Perceptions of the color blue, high-pitch sounds, sweet and sour smells “are not in the molecular structures. They are created by the action of the molecular structures on our nervous system” (Goldstein, 2002, p. 205). This does not mean that our perception of the physical world is false or that sensory perception is the only legitimate and valid way of obtaining knowledge about human experience and behavior. It means that the sensory picture is only one of many possible ways of perceiving the appearances through which physical reality manifests itself. It is simply the only reality that we can perceive with our physical senses. The fact that what “picture” of the physical environment that is perceived depends upon the sensory systems that are operative is not new. It was made by German physiologist Johannes Muller (1801-1858) in the 19th century who noticed that

the nature of the central nervous system, not the physical stimulus, determines our sensations…. We are aware not of objects in the physical world but of various sensory impulses….Our knowledge of the physical world must be limited to the types of sense receptors we possess…. The nervous system is the intermediary between physical objects and consciousness…. Sensory information is modified, and therefore what we experience consciously is different from what is physically present. (Hergenhahn, 2005, pp. 214-215)

In these terms, "we never see the real world" in a clear, direct, immediate, undistorted, unmediated, neutral, or objective fashion (Christian, 1977, p. 191).

Physical reality does not possess the sensory qualities that we attribute to it. Helmholtz’s work on color vision between 1853 and 1868 continually revealed to him the lack of correspondence between physical stimuli and the sensations associated with them. Our senses are “lovely liars” (Roberts, 1999c, p. 321). At the sensory level, modern physical theory tells us that the physical entities that compose the chair upon which one sits – atoms, molecules, electromagnetic waves – do not inherently possess the qualities that we perceive the physical chair to have (solidity, duration, color, and so forth). As we saw in chapter 2, although our bodies appear quite dependable, solid, and steady to our physical senses, we are not aware that the very senses that make such deductions possible are themselves the result of the behavior of spinning atoms and molecules in constant commotion and activity, literally coming together to form the
body with great exchanges of energy continually occurring between it and the physical environment. It does not bother us one iota that the cells of our body, which the physical senses perceive as being so dependable, solid, and steady is actually composed of completely different atoms and molecules than it was composed of seven years ago. Yet our sensory-perceptual apparatus creatively jumps over such gaps in our physical continuity. The physical matter of our ears, eyes, nose, tongue, and hand changes constantly, with us none the wiser — all because the outer senses force us to translate experience into physical perceptions of solidity, duration, and so forth. Using the outer senses, we can perceive physical reality in no other way.

Neuroscientists studying brain function react to exterior stimuli perceived by their physical senses. These empirical stimuli, these physical carriers of data, these patterns of brain action are all that are presently observable, and are all that scientists have been able to follow. Far greater interactions at the atomic and subatomic levels that also occur are not perceived, and so the true story of the decoding of brain functioning has not yet been understood. To study the human mind and body using only the physical senses, or to consider them as exclusively physical phenomena -- to study human psychology exclusively in terms of the brain's effect upon the body, for example -- is limiting and hampers the finding of solutions that would answer many questions about the human mind, the nature of the physical organism, and the interaction between the two.

Physical senses react to a highly specific but limited field of stimulus energy that constrains what we can know of physical reality. Our physical senses constrain what we can hear and see of the physical world. We are aware of the universe only intrinsically as it impinges upon our sensory receptors. What lies outside of their range remains unknown to us. Physically, the human personality can only handle so much data at once, since it is dependent in that respect upon the body's neurological structure. Physical senses are often blocked so that we are not aware of any given stimulus at any given time, as when sounds that reach our ears are consciously ignored. This means that most of the forces that act and work on us are unseen, unheard, untasted, and untouched, or are psychologically invisible to us. Any event or action that we perceive is only a portion of the true dimensionality of that event. Our sensory receptors simply do not allow us to tune into their other ranges of action.

There is light that we do not see with our physical eyes, sound that we do not hear with our physical ears, odors that we do not smell with our physical nose, and so forth. Our “visual window” onto electromagnetic reality, for example, is limited to about 3800-7200 angstroms. For other animals, their visual field upon the world is quite different. Instead of three different visual pigments (for short-, medium, long-wavelengths) characteristic of normal human color perception, for example, birds and insects have four different visual pigments which gives them higher sensitivity in the short-wavelength ultraviolet range. The eagle and the falcon possess foveas (the area of sharpest vision) whose higher cone density “increase [visual] acuity to two to three times that of humans” (Goldstein, 2002, p. 216). Our visual system with its frontal eyes resulting in overlapping fields of view and binocular disparity necessitates the perception of three-dimensional reality. Bats are blind to light and project high-frequency sonar waves and detect their reflection in order to “perceive” depth.

The same principle applies to our “audio window” onto the universe. The human range of hearing “sound” in response to vibrating air molecules is between 20 Hz (low-pitch) and 20,000 HZ (high-pitch), whereas elephants can detect frequencies far below and dogs frequencies far above this human range of hearing. Mice and dolphins can also hear frequencies that humans cannot. All kinds of sonic realities surround us, moving about us, but we are deaf to them and they are therefore not perceived.

Other species of animals have specialized sensory modalities that permit them to focus on fields of energy that are not picked up by human physical senses (Sinclair, 1985). Fish and amphibians can sense electrical fields, for example. Moths both smell and hear with their antennae. Snakes can detect infrared
radiation and smell with their tongues. “Rats are 8 to 50 times more sensitive to odors than humans, and dogs are from 300 to 10,000 times more sensitive, depending on the odorant (Goldstein, 2002, p. 475).

*The physical senses force us to perceive an available field of energy in physical terms, imposing a highly specialized pattern upon this field of reality.* A flower is something far different to a bird, an insect, a bat, a moth, a snake, a rat, a dog, and a man or woman who encounters it. Each perceives the flower’s reality through its own set of specialized senses. We cannot perceive the valid reality of that flower in any context but our own. Our experience of the flower is the result of a certain unique conscious focusing along certain limited lines induced by the physical senses, without which the flower would not be perceived. Portions of that "same" flower are real in quite different terms to a microbe, a squirrel, a bee, a fish, and a tree, while other portions of the flower are correspondingly unreal because they are not perceived by the organism's sensory apparatus that happens to be operative at the time. In these terms, there is no absolute objective "already out there now real" flower (Lonergan, 1957, pp. 250-254). There are only certain "patterns of experience" that the physical organism has created using its outer senses, and unique focuses or perspectives taken by consciousness projected into dimensions of actuality of which it is a part.

Because our physical senses are equipped only to sense and perceive realities within the physical system, we ignore non-physical data and what is not physically perceived is deemed not to exist. The empty space that surrounds us, though perceived as empty because nothing is physically detected by the human sensory systems is not really empty, but is instead filled with electromagnetic waves, sound frequencies, electrical and thermal energies, and swirling commotions of atoms and molecules. The difference between the edge of a table and the seemingly empty air that surrounds it is simply a matter of difference in density of molecular structure. The boundary is perceptual, not actual, and “space” is simply “where nothing is perceived.” The table that seems to take up space, of course does not, but is simply a part of what is called space.

*A sensory-based psychology is ill-equipped to study psychological intangibles that are nevertheless real.* To the degree psychology insists on relying upon the outer senses for all its knowledge of human experience and behavior, then it will never know what basic reality is, as it exists apart from the sensation and perception of it, or apart from those reasoning processes that depend on and build upon the physical evidence provides of those senses. Even the physical instruments that are built to measure physical reality as it exists "independent" of our physical senses are, like the outer senses themselves, necessarily a part of the "camouflage" sensory appearances of the physical reality that they are intentionally designed and intended to detect. A sensory-based psychology is ill-equipped to study psychological intangibles that are real but that do not take up physical space (e.g., a dream, a thought, an emotion). If we are going to know anything about basic psychological reality and the actualities that exist behind the appearances, then we cannot rely on the physical senses to help us do so. We will have to rely upon alternate modes of perception, alternate channels of communication, and alternate sources of information.

**Characteristics of Perception**

Sensations do not exhaust psychological life, nor do the physical senses provide a firm foundation for absolute knowledge about the true nature of reality. Acknowledging that the sensory receptors and the nervous system of the body provided the physiological vehicle for sensation, Helmholtz (like Kant before him) recognized that the perceiver transforms what the senses provide. The transformation occurs when an individual’s memories of previous learning experiences embellishes sensory information. This act of embellishment converts sensation into perception. For Helmholtz, the perceiver always makes an active contribution to the perceived. Sensations, the raw elements of conscious experience become meaningful only when associated with previous experiences.
Our perceptions are structured in ways that sensory stimulation is not. Max Wertheimer (1880-1943), one of the founders of Gestalt psychology, demonstrated that our perceptions are structured in ways that sensory stimulation is not; that is, “our perceptions are different from the sensations that comprise them” (Hergenhahn, 2005, p. 420). In his demonstration of apparent motion called the “phi phenomenon,” Wertheimer showed that humans are capable of perceiving motion where none exists. One example of apparent motion is the way in which lights on a theater marquee appear to move around its edges, even though they are only flashing on and off in sequence and not moving at all. Instead of seeing the separate actions of isolated lights going on and off, we perceive a continuously moving action. The phenomenon called “perceptual constancy” -- the way we respond to objects as if they are unchanging even though the actual stimulation that our senses receive varies greatly -- is an example showing the opposite tendency at work in human perception: How humans are capable of perceiving constancy where none exists.

Perceptual processes focus on similarities and ignore differences. Sensory and perceptual systems are highly discriminating and selective, accepting certain stimulus qualities and features, intensities and frequencies, while ignoring others. The outer senses induce a conscious focusing of attention and awareness along certain limited lines, forcing us to concentrate upon the similarities among things and ignore their differences, perceiving objects and events as a unity-identity-whole grasped in data. We naturally and spontaneously organize the similarities and discontinuities we perceive in any stimulus array using perceptual heuristics referred to as “Gestalt principles of perceptual organization” (e.g., Pragnanz, similarity, good continuation, proximity or nearness, common fate, meaningfulness or familiarity, figure ground, common region, element connectedness, synchrony) (Palmer, 1999). Ignoring dissimilarities and discontinuities and concentrating instead upon the similarities and continuities of the attributes or qualities in the stimulus array that we focus upon, we make a pattern of them, and impose those patterns upon the data, which we then perceive as belonging to the objects or bodies themselves. How we exactly do this in neurological terms remains a mystery and is called “the binding problem” – “how neural activity in many separated areas of the brain is combined to create a perception of a coherent object” (Goldstein, 2002, p. 597). We concentrate upon the differences only when we are forced to do so. What appears to be unpredictable, discontinuous, and chaotic only appears that way because of our natural acceptance, perception, and focus upon the ordered continuities, regularities, and similarities from the available field of energy to which our sensory receptors respond.

Discrepancies exist between objective physical objects and subjective perceptions. The outer senses (visual, auditory, olfactory, gustatory, somatosensory) comprise the principal surface-contact and interface between our subjective world of sensory-based perception and the so-called objective world of physical reality. The nature of the discrepancies between so-called objective physical objects and individuals’ subjective perceptions of those things has been a topic of debate ever since empiricist philosopher John Locke (1632-1704) and rationalist philosopher Immanuel Kant (1724-1804) discussed the nature of human perception.

Newton (1642-1727) had observed that the experience of white light is really a composite of all colors of the spectrum, although the individual colors themselves are not perceived. In 1760 Van Musschenbroek discovered that if complementary colors such as yellow and blue are presented in proper proportions on a rapidly rotating disc, an observer sees neither yellow nor blue but gray. It was evident that often there was not a point-to-point correspondence between physical reality and the psychological experience of that reality. (Hergenhahn, 2005, p. 212)

To explain such observed discrepancies between so-called objective and subjective reality, Locke formulated the distinction between primary and secondary categories and Kant posited the existence of innate categories of thought that transformed sensory information before it is experienced consciously. The conclusion is that our perception of objects, color, depth, size, movement, sound, touch, tastes and odors is a function of our sensory receptors and the properties of our nervous system and not a function of
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the things themselves. “Experience is not only shaped by physiology, but, in cases such as color vision, and hearing, taste, and smell, the very nature of our experience is created by physiology” (Goldstein, 2003, p. 206).

**Perception is context dependent.** The perceptions that result from the outer senses are not images of an external world but signs and symbols that need to be interpreted. How those "signs" and "symbols" are interpreted will depend upon the context, background, or frame of reference within which they are sensed and perceived. “Figures always appear against some ground, and what this ground happens to be always plays some part in what is perceived” (Pollio, 1982, p. 84). The same stimulus can give rise to different perceptions depending on the context in which it is observed. A single event can be perceived within two or more contexts and with each change in context the meaning of the event changes. Two circles exactly the same size will appear unequal when appearing against different grounds, called the “contrast effect”. Letter recognition (e.g., “k”) is more accurate and more rapid when the letter occurs in the context of a word (“book”) than when it occurs in the context of a non-word (“obok”), called the “word superiority effect.” What is true in perceptual experience of circles and words is also true in the perception of people. Change the context of an object or action, and you thereby change its meaning, and by changing the meaning, you change your response.

**Interpretation is an intrinsic feature of perception.** Cognitive psychology clearly demonstrates that human perception is also dependent upon cognitive processes. We select, abstract, interpret, and integrate what we experience of the physical world, called "top-down" processing (Alba & Hasher, 1983; Matlin, 2005). Human perception, at both conscious and subconscious levels, detects and encodes sensory information selectively in accordance with the individual's general knowledge of the world, personal experience, beliefs, and expectations. Once sensory information is selected for encoding, meaning is abstracted and details deemed unimportant, non-essential, or irrelevant are dropped out of memory. During the comprehension process when sensation is transformed into perception, sensory information is interpreted and elaborated upon and may include making inferences to "fill in the gaps" of missing information. The information that remains after encoding somehow becomes integrated with previously acquired relevant information and stored in long-term memory. The important point is that we organize our perceptions through ideas and tend to see only what we are programmed or conditioned to see. We unconsciously select in useful ways only those perceptions that serve to give those ideas validity. This tendency to seek confirmation of pre-existing beliefs is called by many names: “confirmation bias,” "assimilation bias," "belief perseverance effect," and "belief-bias effect" (Evans, 2004; Klayman & Ha, 1996; Lord, Ross, & Lepper, 1979).

In these terms, when a stimulus enters awareness, it elicits a chain of conditioned associations, emotions, fantasies, and so forth, and it is these which are experienced rather than the stimulus per se. Thus our experience of the world and of ourselves is not a direct, immediate, unmediated perception of a body already out there now real, but rather an actively constructed interpretation of an organized, and patterned field of data unconsciously selected in accordance with our ideas of what reality is. It is impossible not to structure sensory stimuli in some fashion if it is to be perceived and understood at all. For “without the conceptual apparatus to investigate a given possibility, nothing is seen” (W. Heisenberg, quoted in Gowan, 1980, p. iv).

Add to the creativity of our physical senses, the contributions that our conceptual structures make to perception (such as our expectations, purposes, interest, desires, beliefs, semantic knowledge, episodic memories, and language), and we can understand how the living picture of the world that the human personality has “in his or her head” depends as much on what the perceiver brings to the knowledge enterprise as it does on the nature of the world that is “out there” (Gregory, 1970). Our own senses bring us information each moment that in a way is already invisibly processed according to our individual beliefs, desires, and intents that serve as organizational schemata which screen out certain information,
causing us to ignore certain stimuli that would automatically catch the attention of another individual. Much of what we take to be perceptions naively given to us by our senses, are actually creations and translations, constructions and interpretations of our physical senses and conscious mind (Ackerman, 1990).

II. CAN THERE BE PERCEPTION WITHOUT SENSATION?

Why Psi Phenomena is a Transpersonal Concern

The world beyond the five senses. One reason for students of general psychology to pay attention to paranormal events is the very nature of psi phenomena. Parapsychology investigates those characteristics of mind and body in which mind seems to operate and at least partially exist independently of the body and has access to nonphysical sources of information. As such, parapsychological phenomena, collectively referred to as psi, are examples of transpersonal experiences and behaviors that reveal the existence of what may be called “inner senses” which allow for perception without sensation and permit actions at a distance. Parapsychological phenomena or psi can be classified into three categories:

- ESP (telepathy, clairvoyance, precognition),
- PK (psychokinesis, materialization, dematerialization, psychic photography, psychic healing),

The parapsychology of spirituality. A second reason for students of general psychology to pay attention to evidence of the human mind’s occasional abilities to transcend time and space is the interface that parapsychology provides between science and religion (Tart, 1997). Transpersonal psychology actively investigates religious experiences, especially mystical experiences of the individual, which William James regarded as “the mother sea and fountain-head of all religions.” Transpersonal psychology also examines those methods or set of practices (e.g., hypnosis and meditation) that trigger such experiences. These "psychotechnologies" work by taking us beyond ordinary ego-bound waking state of awareness and its outer senses to turn attention and the focus of awareness in another direction -- inward and, using the inner senses, achieve a special relationship with those inner forces that daily give rise to psychological and physical life. The extensive laboratory research of psi influences on mental and physical experience are an important body of evidence for transpersonal psychology in that they “give general support to some kind of reality to a spiritual world and a spiritual life” (Tart, 1997, p. 25). Parapsychological phenomena “provide essential grounds for believing in and validating religious experience” (Rao, 1997, p. 70). Parapsychological findings “provide data and concepts for a new interpretation of religious and spiritual phenomena, and can account for the persistence of beliefs and experiences that bear on supernatural entities, worlds, and dimensions” (Grosso, 1997, pp. 102-103). The strong scientific evidence in parapsychology “can be useful to those on spiritual paths 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” (Braud, 1997, p. 150).

Psi experiences are normal, natural, and remarkably widespread. A third reason for students of general psychology to pay attention to paranormal phenomena is that such experiences are normal, natural, and remarkably widespread (Koerner & Rich, 1997; Newport & Strausberg, 2001; Targ, Schlitz, & Irwin, 2000; van Lommel, van Wees, Meyers, & Elfferich, 2001). National polls (e.g., Gallup, Roper, National Opinion Research Center) consistently report that anywhere between 50 to 75 percent of Americans believe in paranormal phenomena not because of wishful thinking, self-deception, delusion, gullibility, or
some kind of cognitive deficit in their critical thinking faculties, but on the basis of their personal experience (Gallup & Newport, 1991; Irwin, 1993; see also poll results cited in the American Society for Psychical Research Newsletter, Spring 1990, XVI, 2, p. 21). A large number of working scientists believe that ESP either is an established fact or a likely possibility whose convictions arise as a result of some definite personal experience (Evans, 1973; Gallup & Proctor, 1983; Wagner & Monet, 1979).

What the Skeptics Claim and Why It Just Ain't So

Are people who believe “weird” things irrational, foolish, and stupid? So-called skeptics and debunkers of parapsychological claims usually assert that people who believe in the existence of psi phenomena are illogical, less intelligent, irrational, credulous, uncritical, foolish, sloppy thinkers, and prone to external locus of control (known as the “Cognitive Illusion” hypothesis) (Pohl, 2004). People who believe in the existence of ESP have uncritically accepted what “has undoubtedly come from the general media, rather than from reputable scientific sources” (Stanovich, 2001, p. 28) because “charlatans have devised ways to make [psi] seem plausible to the very suggestive (most of us in a weak moment)” (Kahane & Cavender, 2002, p. 136). “More than anything else the reason people believe weird things is because they want to. It feels good, It is comforting. It is consoling…. [It] offers immediate gratification…. simple explanations for an often complex and contingent world…. [and] simple, immediate, and consoling canons of morality and meaning… Hope springs eternal” (Shermer, 2002, pp. 273-278).

The fact of the matter is that the list of people who have spent time studying the evidence for psi for themselves, and who have given testimony to the genuineness of paranormal events include some of the most respected, intelligent, and well-known people of our culture – many Nobel-prize winning scientists, authors, inventors, philosophers, military leaders, psychologists, astronauts, and business people (Griffin, 1997, p. 13) including:

- Philosophers, such as Henri Bergson (1927 Nobel prize for literature), C.D. Broad, Curt Ducasse, Gabriel Marcel, H.H. Price, F.S.C. Schiller, Michael Scriven, Henry Sidgwick.
- Inventors, such as Chester Carlson (physicist and inventor of Xerox endowed a chair at the University of Virginia to study reincarnation); James S. McDonnell (aircraft industry pioneer and founder of McDonnell Douglas); Lawrence S. Rockefeller (wealthy businessman and philanthropist helps fund PK research at Princeton University’s PEAR laboratory); Sir William Crooks (inventor of the cathode ray tube); Thomas Edison (light bulb, phonograph), Arthur M. Young (inventor of the Bell helicopter), Hans Bender (inventor of the EEG machine).
- Psychologists, such as Jule Eisenbud, Gustav Fechner (founder of experimental psychology), Theodore Flournoy, William James, Pierre Janet, Carl Jung, William McDougall, Gardner Murphy.
- Physicists, such as Sir William Barrett (pioneered the study of radio waves), David Bohn (coworker of Einstein at Princeton), Brian Josephson (1973 Nobel prize winner for discovery of superconducting electric current), Sir Oliver Lodge (1894 developer of wireless telegraphy), Helmut Schmidt (inventor of the Random Number Generator), Sir J.J. Thomson (1906 Nobel prize winner for discovery of the electron).
- Astronomers, such as Camille Flammarion, Sir Arthur Eddington (evolution of stars).
- Biologists, such as Alexis Carrel (1912 Nobel prize winner), Hans Driesch, Charles Richet (1913 Nobel prize winner), Alfred Russell Wallace (evolutionary theorist).
- Literary figures, such as William Blake, Charles Dickens, Elizabeth Barrett Browning, Arthur Conan Doyle (author of Sherlock Holmes), Aldous Huxley (author of Brave New World), Maurice Maeterlinck (1911 Nobel prize winner), Thomas Mann, Upton Sinclair, Mark Twain, W.B. Yeats (1923 Nobel prize winner), Arthur Koestler (endowed a parapsychology lab at the University of Edinburgh, Scotland), Michael Crichton.
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- American Presidents, including Abraham Lincoln and Warren Harding (who participated in séances), Franklin Roosevelt, and Dwight Eisenhower (who reportedly saw Lincoln’s ghost), and Teddy Roosevelt (a founding member of ASPR).
- The Presidents and Vice-Presidents of both the Society for Psychical Research (SPR) and the American Society for Psychical Research (ASPR) have included Nobel laureates, fellows of the Royal Society, prime ministers, notable scientists including astronomers and physicists and academic scholars, including the great American philosopher and psychologist William James.

This is hardly a catalog of uncritical, untrustworthy, gullible, mentally-unbalanced, third-rate minds or delusional and incompetent “kooks and crackpots,” social misfits and malcontents of low social, economic, and educational status from the lunatic fringe and culturally marginalized who should know better than believe in “results that contradict either previous data or established theory” (Stanovich, 2001, p. 28). This is hardly a list of “smart people [who] believe weird things because they are skilled at defending beliefs they arrived at for non-smart reasons… better at rationalizing their beliefs with reasoned arguments, but as a consequence… are less open to considering other positions” (Shermer, 2002, pp. 297, 302). Risking ridicule, career advancement, and professional reputation, a significant group of scientific pioneers have been willing to investigate with an open mind all evidence available for, as anthropologist Margaret Mead put it, “phenomena that the establishment did not believe were there.” “Is it really ‘more rational’ to believe that all these people, plus many more trustworthy souls, have been guilty of either engaging in, or being repeatedly taken in by, deception, than to assume that paranormal relations really occur” (Griffin, 1997, p. 44)? As the writer Samuel Butler wrote: “Things and actions are what they are, and consequences of them will be what they will be; why, then, should we desire to be deceived” (quoted in Broad, 1969, front piece)

**Is it true that a reproducible ESP phenomenon has never been discovered?** Most introductory psychology textbook authors write as if parapsychological phenomenon is not a real possibility, that its existence remains a mere “hypothesis,” that evidence for ESP is “shaky,” that “there has yet to be a reliable demonstration that any form of ESP actually exists,” and that its study borders on “pseudoscience” (i.e., “theories or statements that look like psychology but are in fact superstition or unsupported opinion presenting to be science”) (Baron, 1998, p. 124; Kosslyn & Rosenberg, 2003, p. 34; Myers, 2001, pp. 236-237; Wade & Tavris, 2002, p. 186). Other introductory psychology textbooks ignore the topic altogether (e.g., Gerrig & Zimbardo, 2008). To deny the very existence of parapsychological phenomena is considered to be a hallmark of critical thinking (Gray, 1991; Halpern, 1997, 1998; Kurtz, 1991; Lawson, 2007; Radner & Radner, 1982; Randi, 1987; Ruscio, 2002, Schick & Vaughn, 2005; Vyse, 1997; Zechmeister & Johnson, 1992).

On the other hand, scientists who are thoroughly familiar with all of the data across laboratories (not just with the provocative anecdotes) present a far different representation of the facts. Philosopher and parapsychologist Stephen E. Braude (1997) distinguishes three broad categories of evidence for psychic functioning: (a) anecdotal or sporadic spontaneous evidence that are unique psi occurrences in the life of an individual outside a laboratory setting; (b) semi-experimental or recurrent spontaneous evidence of psi phenomena that occurs repeatedly in connection with a particular person or location outside a laboratory setting; and (c) experimental evidence of psychic functioning produced by laboratory demonstrations.

Jessica Utts (1991, 2001), professor of statistics at the University of California (Davis), Fellow of the American Association for the Advancement of Science, the American Statistical Association, and the Institute of Mathematical Statistics, presents papers at its conferences on the application of statistics to parapsychology. She helped the American Institutes for Research in 1995 evaluate the results of formerly classified government-sponsored psi research conducted between 1973-1993 for the CIA at the
request of the U. S. Congress (i.e., the famous “Star Gate” psychic spy program) concluded after her review of the evidence:

It is clear to this author that anomalous cognition is possible and has been demonstrated. This conclusion is not based on belief, but rather on commonly accepted scientific criteria. …The statistical results examined are far beyond what is expected by chance. Arguments that these results could be due to methodological flaws in the experiments are soundly refuted. …The results show that remote viewing has been conceptually replicated across a number of laboratories, by various experimenters and in different cultures. This is a robust effect that, were it not in such an unusual domain, would no longer be questioned by science as a real phenomena….It would be wasteful of valuable resources to continue to look for proof…Resources should be directed to the pertinent questions about how this ability works. (Utts, 2001, pp. 131-133)

Dean Radin (1997), engineer and parapsychologist, former Director of the Consciousness Research Laboratory at University of Nevada, Las Vegas, and currently senior research scientist at the Institute for Noetic Sciences, has conducted cutting-edge ESP and PK experiments, and concludes that:

Psi has been shown to exist in thousands of experiments. There are disagreements over how to interpret the evidence, but the fact is that virtually all scientists who have studied the evidence, including the hard-nosed skeptics, now agree that something interesting is going on that merits serious scientific attention….Today, with more than a hundred years of research on this topic an immense amount of scientific evidence has been accumulated. Contrary to the assertion of some skeptics, the question is not whether there is any scientific evidence, but ‘What does a proper evaluation of the evidence reveal?’ and ‘Has positive evidence been independently replicated?’…The evidence for these basic phenomena is so well established that most psi researchers today no longer conduct “proof-oriented” experiments. Instead, they focus largely on “process-oriented” questions like “What influences psi performance?” and “How does it work?” (Radin, 1997, pp. 2, 6, 56)


Whereas many scientists outside of parapsychology remain skeptical of paranormal claims, the consensus among the scientists who are actually involved in psi research is that there is compelling evidence in support of ESP [extrasensory perception] and PK [psychokinesis]… A large body of experimental data has accumulated which is strongly supportive of the reality of psi; and with this support … the attention that was once directed toward proving the existence of psi in its various forms is now turned towards understanding its nature. By exploring the attitudes, moods, personality factors and states of mind of persons who participate in psi experiments, researchers hope to see the psi processes revealed. Also being studied for this purpose are cognitive processes such as memory and subliminal perception, as well as sex differences and the effects of motivation, feedback, distance, and target differences. (Rao, 2001, pp. 4-5)

The late Carl Sagan (1996), a persistent skeptic of psi-related phenomena who maintained a lifelong mission of educating the public about science, acknowledged that something interesting is going on in parapsychological research that deserves “serious study.”

At time of writing there are three claims in the ESP field which, in my opinion, deserve serious study: (1) that by thought alone humans can (barely) affect random number generators in computers; (2) that people under mild sensory deprivation can receive thoughts and images ‘projected’ at them; and (3) that young children sometimes report the details of a previous life,
which upon checking turn out to be accurate and which they could not have known about in any way other than reincarnation. (Sagan, 1996, p. 302)

**How psi works: Some interesting findings.** Based on meta-analyses of more than a thousand experiments investigating various forms of telepathy, clairvoyance, precognition, psychic healing, and psychokinesis, the evidence seen in these experiments are genuinely replicable.

Considered individually, some psi experiments have been successful but the effects did not appear to be easily repeatable….But when studies are combined, there is no doubt that the psi effects are real…The evidence for these basic phenomena is so well established that most psi researchers today no longer conduct proof-oriented” experiments. Instead, they focus largely on “process-oriented” questions like ‘What influences psi performance?’ and ‘How does it work?’ (Radin, 1997, pp. 6, 56).

**Figure 3-1** identifies some interesting scientific findings about "how psi works."

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**Is it true that parapsychology is not a viable research area in science?** According to one skeptic: “These [psi] phenomena are simply not an area of active research interest in modern psychology….Psychology does not consider ESP a viable research area” (Stanovich, 2001, pp. 196-197). The fact of the matter is *psi research is an active research area in science*. Well-known scientific journals have published articles favorably reviewing the body of evidence for psychic functioning including: *American Psychologist* (Child, 1985), *Behavioral and Brain Sciences* (Rao & Palmer, 1987), *Foundations of Physics* (Radin, 1989), *Physical Review* (Stapp, 1994), *Proceedings of the Institute for Electronic and Electrical Engineers* (Jahn, 1982), *Psychological Bulletin* (Bem & Honorton, 1994), and *Statistical Science* (Utts, 1991). “Parapsychology” is listed as an official subcategory of research articles in the American Psychological Association’s (APA) *Psychological Abstracts* and has been for decades. “Parapsychology” is also an official subcategory of federal grants in the Fedix system within the category of behavioral and social sciences providing government-sponsored funding and resources for psi research.

The Parapsychological Association (PA), which was founded in 1957 “to advance parapsychology as a science, to disseminate knowledge of the field, and to integrate the findings with those of other branches of science,” has been an affiliate of the American Academy for the Advancement of Science (AAAS), America’s premier scientific organization since 1969. Its mission statement can be found at the following website: [www.parapsych.com]. The Parapsychological Association has published the *Journal of Parapsychology* (JP) since 1937 to facilitate productive interaction among psychologists and other scholars involved in research, accord recognition to major contributors to the discipline, and devise guidelines about the ethics of experimentation in its field.

The Society for Psychical Research (SPR), the first scholarly association in England for the scientific study of paranormal phenomena, was established in 1882 with the expressed purpose of investigating “without prejudice or prepossession and in a scientific spirit those faculties of man, real or supposed, which appear to be inexplicable on any generally recognized hypothesis,” and continues to this day to publish the results of psi research written by psychologists in the *Journal of the Society for Psychical Research*. The American Society for Psychical Research (ASPR), the United States branch of the SPR, was established in 1885 and continues to publish the results of psi research, much of it by psychologists, in the *Journal of the American Society for Psychical Research*. According to its mission statement, the purpose of the ASPR is “the investigation of telepathy, clairvoyance, precognition, veridical hallucinations and dreams, psychometry, and other forms of paranormal cognition; of phenomena bearing
on the hypothesis of survival of bodily death; of claims of paranormal physical phenomena such as psychokinesis and poltergeists; the study of automatic writing, trance speech, alterations of personality and other subconscious processes insofar as they may be related to paranormal processes; in short, all types of phenomena called parapsychological or paranormal.” ASPR’s mission statement and on-going research interests can be viewed at the following website: [www.aspr.com].

*Psi-related topics in numerous master’s theses and doctoral dissertations.* Schmicker (2002) states that since 1940, “some 40 universities in the U.S. awarded 57 master’s degrees and over 115 doctorate degrees to students who wrote their theses and dissertations on some aspect of the paranormal” (pp. 50-51). Figure 3-2 provides a list of universities and the paranormal topics for which higher education degrees have been awarded (White, 1994).

“Serious parapsychological research is being conducted at major universities and independent research centers around the world, and members of scholarly organization such as the Parapsychological Association…and the Society for Scientific Exploration report ongoing research in referred journals and at a variety of annual professional conventions” (Braude, 1997, p. 56). Figure 3-3 identifies some interesting web sites for the interested student who wishes to learn more about the scientific truth of psychic phenomena.

*Why Does the Controversy Continue?*

Millions of Americans, along with a growing number of physicists, university professors, physicians, psychiatrists, biologists, anthropologists, philosophers, engineers, and other scientists and scholars from around the world believe in phenomena that skeptical mainstream psychologists still consider non-existent and pseudo-scientific. What’s going on here? Why the division between the positive evidence for psychic functioning and the negative evaluations in general psychology textbooks and a refusal to even grant psi’s existence?

*Lack of familiarity with the laboratory evidence for psi functioning.* With very few exceptions (e.g., Smith, Nolen-Hoeksema, Fredrickson, & Loftus, 2003), coverage of psi research in introductory psychology and critical thinking textbooks generally reflect the discipline’s lack of familiarity with the field of parapsychology (Roig, Icochea, & Cuzzucoli, 1991). “This is unfortunate but not surprising. College textbooks reflect the status quo, and the status quo has not yet caught up with the latest developments in psi research” (Radin, 1997, p. 224). There is an unacceptable reliance on secondary sources and the opinions of magicians, for example. Most general psychology textbooks do not even recognize that since the 1970’s parapsychologists have used the term “psi” as a neutral label for psychic phenomena, not ESP, yet still use the outdated term. The text may mention the ESP card test conducted by J.B. Rhine and his colleagues from the 1930’s to the 1960’s and incorrectly claim that ESP card tests are still representative of contemporary research, whereas anyone even casually familiar with recent journal articles and books knows that such tests have hardly been used for decades. General psychology textbooks, if they discuss the post-Rhine experimental evidence for psi functioning at all, may discuss the results of the remote viewing *Ganzfeld* experiments (Bem & Honorton, 1994; Bem, Palmer, & Broughton, 2001; Honorton & Harper, 1974; Hyman & Honorton, 1986).
CHAPTER 3 – Transpersonal Sensation and Perception

In an important article titled “Rhetoric over substance: The impoverished state of skepticism,” parapsychologist Charles Honorton (1993) at the University of Edinburgh in Scotland, describes how the standard arguments that have been used by skeptics to explain away psi research of the past (fraud, inappropriate use of statistics, poor research design, lack of replication) have been resolved through the use of new experimental designs (automated recording, third-party observers, double-blind protocols, etc.) and improved methodology in psi experiments. Former president of the Parapsychological Association Dean Radin (1997) points out that “skeptics who continue to repeat the same old assertions that parapsychology is a pseudoscience, or that there are no repeatable experiments, are uninformed not only about the state of parapsychology but also about the current state of skepticism!” (Radin, 1997, p. 209).

Overlook or ignore the "best evidence" for the reality of psi functioning. No general psychology textbook mentions

- Random Event Generator (REG) experiments conducted by Helmut Schmidt (1969) and Robert Jahn and associates at Princeton University (Jahn, 1982; Jahn, Dunne, Nelson, Dobyns, & Bradish, 1997; Nelson & Radin, 1988);
- Distant mental influence experiments conducted between 1974-1991 (Braud & Schlitz, 1989, 1991; Braud, 1993);
- Meta-analysis of psychokinesis (PK) evidence of all dice-throwing experiments conducted between 1935-1987 (Radin & Ferrari,1991);
- Meta-analysis of REG-PK experiments published between 1969-1984 (Radin, May, & Thomson, 1986);
- Meta-analysis of all English-language forced-choice precognition experiments conducted between 1935-1987 (Honorton & Ferrari, 1989);
- Remote viewing studies conducted at the Stanford Research Institute (SRI) and elsewhere from 1973-1988 (Bisaha & Dunne, 1979; Jahn & Dunne, 1987; Targ, 1996) and by the Science Applications International Corporation (SAIC) from 1989-1993 (Utts, 2001);
- Maimonides Medical Center dream-telepathy studies conducted from 1966-1972 (Child, 1985; Ullman, Krippner, & Vaughan, 1973);
- Recurrent spontaneous evidence of psi phenomena that occurs repeatedly in connection with a particular person or location outside a laboratory setting (Braud, 1997; Drewes, 2002; L. E. Rhine, 1961, 1975; Schouten, 1982)

Figure 3-4 lists studies providing "best evidence" for the authenticity of psi functioning that is ignored or overlooked in most treatments of the topic in general psychology textbooks.

As a result, the textbooks' coverage of the topic presents an outdated and grossly misleading view of parapsychology. “This is unfortunate but not surprising. College textbooks reflect the status quo, and the status quo has not yet caught up with the latest developments in psi research” (Radin, 1997, p. 224). “The reason many people think the reality of psychic functioning is a matter of belief rather than science [is because] they are more familiar with the provocative anecdotes than with the laboratory evidence” (Utts, 2001, p. 118).

Prejudiced perception caused by philosophy of sensationalism and materialism. The fact of the matter is that what most psychologists think they know about psychic phenomena is not an accurate representation of the evidence. Because paranormal phenomena do not easily fit the dominant philosophy of reality
(materialism) and philosophy of knowing (positivism) that underlies mainstream psychology, many psychologists refuse to examine the evidence first-hand. They may refer to the opinions of magicians and simply repeat them. Skeptical psychologists “know” in advance that telepathy cannot possibly exist and is the kind of thing that they would not believe even if it did exist. Psychologists have difficulty dealing with anomalies that exist outside their current scientific paradigm (Kuhn, 1970). The emotional motivation for irresponsible disbelief is probably even stronger – especially in scientifically educated persons whose pride of knowledge is at stake and who have made public pronouncements declaring “a reproducible ESP phenomena has never been discovered” – than the motivation for irresponsible belief is in ordinary people (see Radin, 1997, chap. 13, “A Field Guide to Skepticism”).

Selective reporting of psi research. Irwin Child in his 1985 American Psychologist article discovered one flawed description after another when he compared descriptions of the dream-telepathy experiments conducted at Maimonides Medical Center with the descriptions of those same experiments in books written by psychologists purporting to offer critical reviews of the research (Child, 1985). Similar distortions exist in general psychology and critical thinking textbooks today about parapsychology that give an entirely erroneous impression of psi research (Roig, Icochea, & Cuzzucoli, 1991). Insofar as psychology students and their professors are guided by these flawed descriptions of parapsychology, they are prevented from gaining an accurate understanding of the massive amounts of scientific evidence collected over a century by many different researchers. Irwin Child (1985) concluded his review of the distorted presentations of psi research in general psychology textbooks with the following recommendation: “Interested readers might well consult the original sources and form their own judgments” (p. 1229).

A bias toward unbelief. Wishful thinking – believing what we want to believe no matter what the evidence – and self-deception – consciously disbelieving what, at a deeper level, one fears to acknowledge because it would force a change in one’s worldview – hampers the thinking of many academics when it comes to psi functioning. Misrepresenting an opponent’s position to make it easier to attack them or attacking a weaker study while ignoring a stronger one (straw man fallacy), failing to bring relevant evidence to bear on an argument (suppressed or overlooked evidence fallacy) are common in much of the fallacious reasoning that is used in arguments against the existence of psi functioning. Students and teachers of psychology should not simply accept the word of alleged authorities that have an ax to grind (fallacy of appeal to authority) or accept an argument on the basis of relevant but insufficient information or evidence (fallacy of hasty conclusion) presented in general psychology or critical thinking textbooks, but ought to explore the matter for themselves. Skeptics love skepticism unless skepticism is applied to skeptics’ claims, but this is precisely what must be done when one encounters such universal, dogmatic proclamations as “No evidence exists or has ever existed for ESP.”Psi Functioning as an Example of an "Inner Sense"

A "sixth" perceptual modality. The existence of psi functioning is compatible with the characteristics and attributes of physical sensation and perception that describe the operation of familiar or known sensory modalities of seeing, hearing, tasting, smelling, and touching. Those sensory modalities are quite limited in scope and should not be taken to define or legislate the full range of possible forms of information acquisition available to us. The cognitive capacity called “intuition,” while neglected as a topic of research in mainstream psychology (i.e., you will not find the term listed in the index of general psychology textbooks), has nevertheless been a recognized and widely regarded source of creative inspiration in philosophy, the arts, science, religion, technology, medicine, and business (Csikszentmihalyi, 1996; Harman & Rheingold, 1984; Root-Bernstein & Root-Bernstein, 1999; Vaughan, 1979). Psi functioning may simply be one of these more or less common forms of nonsensory, nonrational ways of knowing. As another perceptual modality, psi functioning simply expands the domain of sensory and perceptual psychology and those more restrictive areas of cognitive science and biological
psychology that may still be hypnotized by the false belief that “There is nothing that is in the intellect that is not first in the senses” (Blaise Pascal).

**Psi perception is understandable in terms of modern physical theory.** The phenomena are genuine, are psychological facts, reported for centuries by quite normal persons, and are nearly frequent enough to be commonplace. Were it not in opposition to orthodox Western psychology’s officially accepted philosophical theses about “the way the world and universe operates,” psi functioning would no longer be questioned by science as a real phenomena. The fact of the matter is that no modern physical theory (e.g., quantum physics or the general or special theories of relativity) precludes the existence of any specific sensory or perceptual or cognitive phenomenon – normal or paranormal. In fact, psi functioning is more understandable in terms of modern physical theory while ordinary sensory-perceptual functioning may be better understood in Newtonian terms, and may be no more a threat to the laws of physics than would, say, the phenomena of free will or intention. The current laws of physics may simply be irrelevant or need to be amended to accept the role of consciousness in its equations in its understanding of the nature of physical reality.

**Physical senses as extensions of inner senses used to perceive thought, emotions, dreams.** Psi phenomena at the very least are indications that our species possesses a highly sophisticated network of inner communication and inner methods of perception that are equipped to perceive data that is not physical. Transpersonal writer, mystic, and channel Jane Roberts (1970, chapter 19) proposes a series of evocative hypotheses about the nature and function of these “Inner Senses.” The specialized physical senses that allow us to live in physical reality are considered to be extensions of these inner methods of perception that are used in the dream state, out-of-body experiences, telepathy, and will be relied upon after death. These inner senses operate constantly beneath normal waking consciousness and release telepathic and clairvoyant abilities. They are equipped to perceive data that is not physical and reach beneath and behind the "camouflage" appearances of physical matter to perceive basic reality as it exists separate from and independent of the physical world. The Inner Senses are channels that provide communication between various dimensions of existence, and between the outer ego and the inner, transpersonal self. or "soul.” "Using the Inner Senses, we simply increase our entire range of perceptions. . . They reveal to us our own independence from physical matter, and let us recognize our unique, individual multidimensional identity" (Roberts, 1970, p. 253). **Figure 3-5** provides directions for exploring the use of the Inner Senses called Psychological Time or "Psy-Time" whose practice leads to the recognition, development, and use of other Inner Senses.

**Another instance of William James's "white crow."** Just because psi functioning cannot be easily explained by psychology’s official definition of experience and sensationist (“All knowledge must come through the senses”), materialist (“Perception is the automatic by-product of the brain’s processes), and mechanist (“We are living machines”) view of reality is no reason to declare psi functioning improbable or impossible. We need only one verified case of psi functioning in which fraud, trickery, design flaws, inadequacy of control for confounders, alternative explanation of results, imprecise measurement of variables or covariates, experimenter effects, and other “normal” explanations are ruled out to cast doubt on the principle that “psi functioning” is impossible and does not exist. Psi functioning is another example that when we learn that something that psychological science tells us cannot happen but does anyways, we should take note of William James’s famous statement to the effect that it takes only one single white crow – one counterexample – to prove that not all crows are black: “If you wish to upset the law that all crows are black, you mustn’t seek to show that no crows are black; it is enough if you prove one single crow to be white” (quoted in Murphy & Ballou, 1960, p. 41). In the case of psi phenomena, we have not
one but dozens to hundreds of white crows that make the universal proposition “Psi does not exist” untrue. Another so-called "white crow" may be the apparitions at Medjugorje.
CHAPTER 3 – Transpersonal Sensation and Perception

III. Transpersonal Sensation and Perception in Action: Apparitions at Medjugorje

It is impossible to give a complete account of the apparitions of the Blessed Virgin Mary associated with the remote mountain village of Medjugorje (pronounced meh'-joo-gor-yeh) in the former Yugoslavia that began in 1981 and continue to this day. One can only refer the psychologist interested in religious issues to the abundant literature about the phenomenon that exists in print materials and on the Internet -- much of it published only in French, Italian, and Croatian languages (Medjugorje Books and Publications, 2005). According to Google, there are over 2 million references to "Medjugorje" on the Internet and there is little indication that public interest in the Marian apparitions that are occurring there is diminishing (Apolito & Shugaar, 2005). The controversial issue for psychologists interested in religious issues is whether the apparitions at Medjugorje are actual and whether they reveal real transcendental realities.

The Phenomenon, its Social Impact, the Scientific Studies, and the Church

The disinterested observer will find that most of the Internet websites devoted to the Marian apparitions at Medjugorje are widely enthusiastic, almost fanatically credulous and evangelical in their support of the authenticity of the apparitions (see, for example, http://www.medjugorjeusa.org/; http://www.childrenofmedjugorje.com/; http://www.medjugorje.org/; http://www.medjugorje.net). Official documents and declarations of the Roman Catholic Church are much more reserved in their judgment about the apparition’s genuineness and, in fact, assert that it is impossible to prove or affirm that the Madonna has ever appeared to anyone in Medjugorje at all (Davies, 2004).

The Medjugorje phenomena. This particular religious phenomenon began on June 24, 1981 at the small Catholic parish of Medjugorje with a population of about 4,000 people in the Republic of Bosnia-Herzegovina of the former Yugoslavia. It was on that day that six Croatian adolescents between the ages of 10 and 17 -- Vicka Ivankovic (age 17), Mirjana Dragicevic (age 16), Marija Pavlovic (age 16), Ivan Dragicevic (age 16), Ivanka Ivankovic (age 15), and Jakov Colo (age 10) -- first reported that they had an apparition of the Blessed Virgin Mary (or Gospa, as the local Croatian Catholics call her). The phenomenon is referred to as an "apparition" instead of a "vision" because in a vision there is nothing necessarily external to the percipient being perceived through the physical senses, whereas in an apparition there is something external to which the percipients respond, which is what the six youths at Medjugorje claim to perceive.

During the first year, the apparition appeared and spoke to the six percipients (or "Seers" as they are called in the popular literature) every day at 6:40 p.m. when they collectively assembled at a hill called Podbrdo on Mount Crnica in Medjugorje (First Days, 2006). Today, the rigidity of that schedule has given way to a more spontaneous framework. The Marian apparitions are no longer tied to the collective assembly of the six percipients or to a particular location, but to the individual percipients themselves. The percipients (all of whom are currently married) have experienced the apparition separately or alone, regardless of their location -- whether in Boston or Alabama, Sarajevo or Medjugorje, Italy or Switzerland, in private homes or public churches, fields or vineyards, cars or buses.

Following periods of fervent praying, the Madonna appears and speaks for 5, 10 or 15 minutes to a percipient while remaining invisible and inaudible to everybody else, confiding daily "Messages" or special monthly Messages on the 25th of each month, which are then translated and made public. The Messages encourage people to pray daily, especially the Rosary; fast weekly, especially on Wednesdays and Fridays; read the Bible every day; confess one's sins every month; and receive Holy Communion.
Nine or ten different "Secrets" have also been privately conveyed to each of the percipients that are intended for special groups of people (e.g., the sick, the young, priests, souls in purgatory, families). The frequency of Marian apparitions varies with the number of Secrets that each of the six percipients have received. The Madonna appears daily to the three percipients who have received only nine Secrets (Vicka Ivankovic, Marija Pavlovic, and Ivan Dragicevic) and appears once a year to the three percipients who have received all ten Secrets -- on Christmas Day to Jakov Colo, on the anniversary of the apparitions to Ivanka Ivankovic, and on the birthday of Mirjana Dragicevic. Only one of the Secrets has been revealed to the general public -- the miraculous appearance of a great shrine in Medjugorje in honor of Mary as a "great sign" to atheists that the apparitions are real -- a prophecy not yet actualized, though greatly anticipated (Franken, 1999).

When all ten Secrets have been revealed to all six percipients, the apparitions will cease and three "warnings" will occur intended to encourage humanity to turn away from a life of sin and convert to the teachings of Jesus (although not necessarily to the Roman Catholic Church). The apparitions were initially predicted to occur for only a few days. They have continued for more than 27 years and theoretically could go on forever. Three of the six percipients have said the Gospa has promised them apparitions for life. A second generation of percipients has emerged who hear but do not see the Blessed Mary (Jelena Vasilj and Marijana Vasilj who both live in Medjugorje).

**Sociological impact of the apparitions at Medjugorje.** What has been the apparition's sociological impact? A virtual cottage industry has grown up around the events tied to Medjugorje. Pilgrim guides and tourist agencies, merchandise and souvenirs, web sites and newsletters, brochures and prayer books, and even a Hollywood movie (*Gospa* in 1995 starring Martin Sheen and Morgan Fairchild) publicly promote the apparitions. The Marian apparitions at Medjugorje have attracted an estimated 22 million pilgrims to the locale who arguably seek the apparitions in order to confirm their faith (Davies, 2004). It is this "Fruit" of Medjugorje -- the converted lives, the increase in piety and devotions, the recovery of lost faith -- that defenders of the apparitions point to as the ultimate sign of its authenticity (Laurentin, 1987, chap. 8).

What appearance does the Blessed Virgin Mary display during the apparition? Several portraits have been painted of the apparition based upon descriptions provided by the original six percipients (e.g., "A crown of stars and a pedestal of clouds, a white veil and a gray robe") (Laurentin, 1987, p. 7). Although the painting by the Italian artist Giovani Mainardi is popular, it is the portrait of the Blessed Mary painted in 1986 by the Belgium painter Leopold Baijot that is said to be "the best picture and the most conforming to the apparition," despite some disagreement among the six percipients regarding its details (e.g., color of the robe, gesture of the hands, smile on the face, position and number of stars) (Laurentin, 1987, p. 12).

**Scientific investigations of the phenomenon.** What scientific investigations have been conducted about the phenomenon? The regularity of the apparitions has provided the opportunity for a number of psychiatric and medical studies to be conducted into the mental and physical condition of the six percipients (De Vincentiis, 1999; Frigerio, Bionci, & Matalia, 1986; Gramaglia, 1987; Laurentin, 1987, chap. 5; Laurentin & Joyeux, 1987; Pansaraklam, 2001; Resch & Gagliardi, 2000). For instance, ocular, auditory, respiratory, cardiac, electrodermal, and cortical measurements and behavioral observations have been obtained before, during, and after the Marian apparition. Results indicate that the percipients appear to enter into a state of consciousness that Catholic mystical theology calls "ecstasy" during the apparitional event (Laski, 1961). The ecstatic focus of consciousness is characterized by the occurrence of synchronous behaviors (e.g., simultaneous kneeling, raising of eyes and head, duration and latencies of verbal responses) and a complete absorption of attention upon a stimulus that is apparently objectively perceived with open eyes and neurologically processed along normally functioning sensory pathways to an alpha-rhythm entrained brain, accompanied by variable sympathetic nervous system hyperactivity, heightened anesthesia, and the absence of normal pupillary and startle reflexes.
Psychiatric testing and evaluation indicates that the percipients are neither delusional, hysterical nor epileptic, but are quite normal individuals dealing as best they can with the stresses that celebrity status has brought into their lives (Bartulica, 1991). Experiments attempting to induce "hypnotic" ecstasy in the percipients have proven inconclusive (De Vicentiis, 1999). Although it has been argued that "there is no evidence to suggest the probability of autohypnosis" (Pandarakalam, 2001, p. 229), behaviors that accompany the apparitional experience suggest that at certain stages a state of dissociation is achieved (e.g., involuntary responses, absence of reaction to stimuli, restriction of the visual field, little or no awareness of ambient stimuli, absence of ordinary startle response, muscular rigidity, pupillary dilation with slow eyeball movement, effacement of waiting). The dissociation hypothesis is further supported by self-reported phenomenological qualities of the experience (e.g., tendency to accept facticity of the experience, absence of doubt or skepticism, absence of fear or concern, sense of comfortableness about in going into ecstasy, sense of timelessness, loss of goal orientation, feeling of oneness and peacefulness).

Roman Catholic Church's position. What is the Roman Catholic Church's position regarding the Marian apparitions at Medjugorje? Between 1981 and 1991, three ecclesiastical commissions consisting of 30 priests and physicians and 20 bishops investigated the apparitions. The official conclusion of the Roman Catholic Church after 10 years of investigation is expressed in the Zadar Declaration (April 9-11, 1991): "On the basis of studies conducted so far, it cannot be affirmed that supernatural apparitions and revelations are occurring" (quoted in Davies, 2004, p. 89). In 1991, a five-year war broke out between the Republic of Croatia and the Republic of Bosnia-Herzegovina. All ecclesial investigations were called to a halt. No further official investigations by the Church into the apparitions have taken place since that time.

Of the 98 Marian apparitions claimed to occur between 1347-2008 C.E. which are listed on the Apparitions of Jesus and Mary website (http://www.apparitions.org/), five have been disapproved by the Catholic Church, 24 have been recognized as authentic, and 69 have been neither approved nor disapproved. The apparition at Medjugorje has not followed the same pattern of earlier approved Marian apparitions and falls into the category to which Church authorities will neither approve nor disapprove (Foley, 2002). Church authorities began to question the authenticity of the Marian messages when the parish priest (Fr. Jozo Zovko) and local bishop (Msgr. Pavao Zanic) came to believe that the Messages purportedly being communicated by the Blessed Virgin Mary contained contradictions and falsehoods, and reflected a certain human manipulation in the interference of Church affairs that was deemed inappropriate for an authentic Marian apparition (Davis, 2004, Jones, 1994; Sivric, 1989). Church authorities began to question the authenticity of the Marian messages when both the parish priest (Fr. Jozo Zovko) and local bishop (Msgr. Pavao Zanic) came to believe that the Messages purportedly being communicated by the BVM contained contradictions and falsehoods, and reflected a certain human manipulation in the interference of Church affairs that were deemed inappropriate for an authentic Marian apparition (Jones, 1994; Sivric, 1989). For instance, there were the psychological issues pertaining to the Madonna's veiled threats pressuring the local bishop to accept the apparitions ("Tell the bishop that I seek a quick conversion from him towards the happenings in Medjugorje before it is too late. . . .I am sending my second-last warning. If what I seek does not come about, my judgment and the judgment of my Son await the bishop," quoted in Davies, 2004, p. 56). There were ecclesiastical issues related to the Madonna's repeated defense of a priest who had been expelled from the Order and dispensed from his vows on the instructions of Pope John Paul II for disobedience to superiors and for having sexual relations with a Franciscan nun ("He is not guilty [Our Lady repeated this three times]. The bishop does not keep order. That is why he is responsible. The justice which you have not seen will come back," quoted in Davies, 2004, pp. 31-32). There were commercial issues related to the Madonna promoting the sale of books favorable to the phenomenon ("Let the priests read Laurentin's book and propagate it," quoted in Davies, 2004, p. 109). Finally, there were political issues related to the Madonna taking sides on questions of parish jurisdiction -- what has been called the "Herzegovina Question" (i.e., disobedient Franciscans refusing to turn over religious parishes to diocesan clergy, establishing parishes outside the
diocesan structure, erecting ecclesial buildings and forming religious communities without permission, performing invalid marriages and Confirmations). Proponents of the apparitions at Medjugorje claim that the apparitions and the Herzegovina Question are separate issues. Bishops see them as inextricably linked with the BVM being used to justify continued Franciscan disobedience to Church authority.

The Congregation for the Doctrine of the Faith (CDF), the official arm of the Holy See in Rome, while not denying the deepening of spiritual life that has occurred in pilgrims, does not agree that the apparitions are its cause. In 1991, CDF forbid all public pilgrimages to Medjugorje that presume it to be a place of authentic Marian apparitions ("Official pilgrimages to Medjugorje, taken to be a place of authentic Marian apparitions, may not be organized whether at parish or diocesan level" (quoted in Davies, 2004, p. 169)). Needless to say, there has developed a palpable tension between believers in the Medjugorje apparitions who judge them to be genuine and ecclesiastical authorities who remain uncertain.

**Examining Psychological Processes in Religious "Visions" and "Apparitions"**

**Three key questions.** As students interested in the applications of transpersonal psychology, the questions before us are these:

- Is something "supernatural" and "miraculous" happening at Medjugorje or is it "one of the most subversive hoaxes in the history of the Catholic Church" (S. Caldwell, quoted in Davies, 2004, p. 175)?
- Are the Marian apparitions and Messages at Medjugorje solely the product of the psyche of the six percipients or is some actual transcendental reality producing them?
- Can a science of psychology be expected to investigate or interpret with any success this or any other manifestations of inner reality unperceived by the physical senses and that is labeled "miraculous" or "supernatural," or is such a project simply beyond the reach of psychology's existing theories and concepts, linguistic frameworks and philosophic assumptions, subject matter and methods of inquiry?

We cannot begin to answer these questions or understand the nature of the Marian apparitions at Medjugorje unless we first enlarge our understanding of human personality action, acknowledge the multidimensional nature of reality, and recognize the true creativity of consciousness.

**Limitations of more conventional true/false approaches to apparitions.** As children of our culture and the modern scientific age, we search for certainties. We are taught from childhood to consider so-called objective, physical facts as the only criteria of reality and that what is subjective or imaginary is not real. We refuse to admit into existence as real, legitimate, or valid anything that we cannot see, hear, smell, taste, or touch through the physical senses. We do not trust anything unfamiliar which does not occur in the usual manner on the physical level, such as the apparitions at Medjugorje, unless we have personal experience of it, are consciously aware of what is happening, how it occurs, and why. We want to know where the apparitions are coming from, if they are part of the percipients' subconscious and we want our answers given to us in a manner that the logic of our intellect and comprehending ego can understand.

The nature of the apparitions occurring at Medjugorje is so uncertain - appearing to be either miraculous and supernatural on the one hand, or conventional and unremarkable on the other, because we try to examine them from the perspective of normal waking consciousness and the interpretive filters of conventional religious concepts and rational true-or-false terms. We naturally interpret the apparition's manifestation and any symbolic meaning that it may have in light of our beliefs of good and evil, the possible and the impossible, what is normal and abnormal, real and unreal. Our reasoning mind wants its truths labeled and clothed in clear-cut, black-and-white terms. We seem to think that if we can name and label the apparitions of Medjugorje a “supernatural religious event” on the one hand, or a “subconscious
It is important to recognize, psychologically speaking, that when people pray fervently, have authentic peak experiences, ingest entheogens, commune with nature, engage in meditation, or even use the Ouija board, they are working through areas of the psyche (Grof, 1985; Hastings, 1991; Maslow, 1971; Myers, 1976; J. Roberts, 1970; T. Roberts, 2001). At some indescribable point, a certain state of dissociation is achieved, and the psyche opens up into levels of being, reality, experience, or understanding usually unavailable to ego-directed awareness. Because most people do not understand their own inner reality or have been taught to mistrust themselves, revelatory material must then erupt as if it came from an outside source if it is to be accepted or even perceived at all. It may personify itself in order to get its message across, dramatizing itself through the creativity of the percipient’s beliefs and personality.

Often this presents the percipient with an irreconcilable dilemma. He or she must prove that the outside source really exists as it is physically perceived and interpreted or else lose faith in the actuality of the phenomenon and face the fact that our perception and understanding is not infallible. However, it is possible and actually much more efficient and practical to accept this fact and also acknowledge that there is more to reality than what the physical senses can show, and that much exists in the subconscious to which we will not admit (Ellenberger, 1970; Jung, 1960; Kelly et al., 2007; Myers, 1903, 1976).

**A psychology for the 21st century.** Modern psychology, despite its outward appearing scientific face, has ignored those very scientific theories (e.g., Relativity theory, Quantum theory) that might give a theoretical basis for understanding that inner psychic realm properly and for interpreting religious phenomenon such as the Marian apparition at Medjugorje with some success. Our psychological science acts as if Einsteinian and Heisenbergian concepts have no application to understanding the actions of the brain or the energetic nature of mind-body relationships (Stapp, 2004). It still prefers to build models of human experience and behavior along the lines of Newtonian mechanics. This will be the direction toward which psychology must travel in the future.

Modern physical theory and experiment has demonstrated, both mathematically and empirically, that there is not one reality but in fact an infinite number of simultaneous, diverse but interweaving fields or planes of actuality exerting pressures and influences one upon the other, which exist behind and independent of the physical one with its matter, atoms, molecules, and camouflage appearances created by and perceived through the outer senses (Davies & Gribbin, 1992; Herbert, 1985; Wolf, 1988). Some physicists, mathematicians, and philosophers imagine these non-physical realms to be mere shadows -- unsubstantial, haphazard, formless, impermanent, fleeting semi-structures -- having no reality except during our own contact with them, while others conceive their existence to be as vivid, actual, and permanent as the physical one, and while not physical are nevertheless equally valid and legitimate (Friedman, 1994, 1997; Weber, 1986).

In quite scientific terms, the fourth dimensional physical field of reality with its width, height, length, and time reference points can be thought to represent an "explicate" or outer order of events that is the translation or by-product of another far larger "implicate" or inner order of events of which it is part and that is necessary for the continued existence of the physical field (Bohm, 1980; Bohm & Peat, 1987). Ideas themselves being composed of definite energy are a part of that inner reality. When translated and transformed into other kinds of energy, they provide the psychological framework behind the physical reality within which we experience our physical existence (Friedman, 1994, 1997; Goswami, 1993).

Godel's "incompleteness theorem" leads us to the correct conclusion: Physical reality cannot be its own source.
As the physical life of any individual rises from hidden dimensions beyond those easily accessible in physical terms, and as it draws its energy and power to act from unconscious sources, so does the present physical universe, as you know it rise from other dimensions. So does it have its source, and derive its energy from deeper realities. Reality is far more diverse, far richer and unutterable than you can presently suppose or comprehend. (J. Roberts, 1972, pp. 237-238)

Different tools are required for the task of exploring and interpreting these unconscious sources, other dimensions, and deeper realities of physical life. The basic and firm foundation of the science of psychology as conventionally understood is its direct or indirect interpretation and manipulation of physical matter as perceived through the physical senses (Slife & Williams, 1995). The physical senses and scientific tools of investigation that are based upon them are not equipped to perceive what does not fall within their range or domain. They cannot therefore be expected to investigate or interpret with any success other dimensions or manifestations of inner reality unperceived by the physical senses (e.g., an idea, a dream, or, in the present case, the Marian apparitions at Medjugorje).

Different tools of investigation are required (e.g., intuition, hypnotic dissociation, applied association, directed imagination) that are not bound or limited by the so-called laws of logic, cause-and-effect, or linear time and that involve other types of validity whose impact on the intellect is every bit as real, even if not completely reasoned out or consciously understood (see, for example, the revised human science methodologies described by Braud & Anderson, 1998; Hart, Nelson, & Puhakka, 2000; Palmer, 1998; Polkinghorne, 1983; Vaughn, 1979). In order to study a phenomenon properly, we must indeed immerse ourselves in the medium in which the phenomenon occurs (Tart, 1992). Psychic reality and its inner data (e.g., ideas, feelings, dreams) can only be explored and interpreted through the use of inner senses that are the basic tools of an inner self (Butts, 1997a; J. Roberts, 1970).

Epistemology cannot be divorced from ontology. We necessarily limit our fields of perception and the validity of the knowledge that is possible to us when we limit our definitions of reality or possibilities of reality (Harman & Clark, 1994). To admit into evidence only those things we can absolutely see, hear, smell, taste, or touch because of a slavish dependence upon the physical senses is simplicity itself, but such knowledge lacks full validity since in so doing we only appreciate half or maybe a third of reality. We hamper our imagination, intuition and intellect in the formation of new concepts that can aid in bringing to light and distinguishing the vast intertwining subconscious areas, layers, and levels within the self that have been left undiscovered and unknown and in which religious phenomena such as the Marian apparitions at Medjugorje originate (Myers, 1903, 1976).

A Critical Realism - Aspect Psychology Framework

This transpersonal interpretation of the Marian apparitions at Medjugorje is based on the Aspect Psychology of mystic and writer Jane Roberts (1975, 1976) and what philosopher-theologian John Hick (1999) calls the "critical realist principle." It is a framework that can aid the exploration and interpretation of any authentic religious apparition. The principle of critical realism acknowledges that there are indeed inner realities which exist behind and independent of fourth dimensional physical appearances. As a manifestation in an outer order of events, the form and appearances which those "inner realities" assume on the physical field depends upon the perceptive and cognitive mechanisms that are operative at the time. As Helmholtz discovered two centuries ago, “the senses actualize elements of the physical world that otherwise exist only as potential experiences. . . . [and] the perceiver transforms what the senses provide” (Hergenhahn, 2005, p. 219). St. Thomas Aquinas put the principle this way: “Cognita sunt in cognoscente secundum modum cognoscentis” or “Things known are in the knower according to the mode of the knower” (quoted in Hick, 1999, p. 43).
Example of Julian of Norwich's visions of Christ. Hick (1999) uses the example of Julian of Norwich’s (1342-after 1416) visions of Christ to clarify the difference between non-realist, naïve realist, and critical realist approaches to the question of whether mystical experiences actually reveal direct knowledge about the objective existence of extra-mental transcendental realities.

If we take as an example... Julian of Norwich’s visions of Christ and her hearing him speak of the limitless divine love, the non-realist interpretation is that the entire experience was a self-induced hallucination -- not in any sense a revelation, not an expression of the ‘impact’ of the Transcendent upon her. The naïve realist interpretation -- which was probably her own understanding of her experiences -- is that the living Christ was personally present to her, producing the visions that she saw, and uttering in Middle English the words that she heard. But the critical realist interpretation, which I believe to be correct, is that she had become so open to the transcendent, within her and beyond her, that it flooded into her consciousness in the particular form provided by her Christian faith. ... Her experience was thus a genuine contact with the Transcendent, but clothed in her case in a Christian rather than a Hindu, Buddhist, Islamic or other form. ... In these and many other ways, the impact of the transcendent reality upon us receives different 'faces' and voices as it is processed by our different religious mentalities. Religious experience, then, occurs in many different forms, and the critical realist interpretation enables us to see how these may nevertheless be different authentic responses to the Real. But they may also not be. They may instead be human self-delusion. Or they may be a mixture of both, and so a critical stance in relation to them is essential. (pp. 42-43)

Each of these interpretations can be applied to the Marian apparitions of Medjugorje. The critical realist interpretation is that the apparitions may represent a deep part of the structure of the psyche of the six percipients as well as a definite personification of a multi-reality consciousness (or Virgin Mary entity).

An inner and an outer order of events. From a critical realist perspective, there is an inner and outer order of events. The inner order of events exists behind and independent of the outer physical one. It constitutes what William James (1902/1936) called "the higher part of the universe" (p. 507). It is not an impersonal realm since it gave birth to human personalities like you and me. It is quite legitimate, valid, actual, and real. According to William James,

The unseen region in question is not merely ideal, for it produces effects in this world. When we commune with it, work is actually done upon our finite personality. ... But that which produces effects within another reality must be termed a reality itself, so I feel as if we have no philosophic excuse for calling the unseen or mystical world unreal. (James, 1902/1936, pp. 506-507)

In these terms, the Marian apparition at Medjugorje is a reality in an inner order of events that produces real effects in people's experience of themselves and of their world. The apparition of the six youths of Medjugorje presents some very private information of significant importance to them from that inner order of events - intuitive and revelatory transpersonal knowledge far beyond the boundaries of their known selves that springs into physical existence to expand their conscious knowledge and experience.

As a reality in an inner order of events, however, it can only be expressed or manifested symbolically in the outer three-dimensional physical world of space and time. The valid and significant creative material, the charged psychic content, becomes changed by the beliefs, symbols, ideas, and intents of the conscious mind of the six "Seers" who must interpret and translate the information they receive. In this way, quite legitimate and valid psychological experiences of basically independent, alternate realities and actualities become clothed in the garb of very limited, conventional images and ideas of the religious and cultural beliefs of our time.
**Jane Roberts’ Aspect Psychology.** Jane Roberts’s Aspect Psychology is an original theory of human personality that expands upon the critical realist principle by incorporating basic tenets of the philosophy of Idealism and the concept of panpsychism (de Quincey, 2002; Skrbina, 2005). Aspect Psychology is based upon the body of writings collectively known as The Seth Material (J. Roberts, 1970).

The basic and firm groundwork of the material and its primary contribution, lies in the concept that consciousness itself indeed creates matter, that consciousness is not imprisoned by matter but forms it, and that consciousness is not limited or bound by time or space; time and space in your terms being necessary distortions, or adopted conditions, forming a strata for physical existence. (J. Roberts, 1997b, p. 312)

Aspect Psychology posits the existence of "a basic creative undifferentiated reality -- an ever-present field of latent activity -- that springs into being as consciousness encounters it, and patterns it according to its own perceptive focus" (J. Roberts, 1975, p. 180).

Assuming the Marian apparition to be a valid construction, it would be composed of actual matter that represents the translation of action from inner reality (called Framework 2) and its projection onto and into the physical, material field (called Framework 1) in answer to an inner psychological need and purpose (J. Roberts, 1981a). Like a round peg trying to fit a square hole, however, the resulting translation gives us events squeezed out of shape to some degree as the six youths superimpose one kind of reality over another, interpreting one kind of information from the inner order in terms of the outer one with all of its quite conventional beliefs, symbols, ideas, and images, altering it to some extent. The symbolization and personification is important psychologically as an archetype for other dimensions of their own personality. The Marian apparitions and the Messages that the six youths receive represent communications from multidimensional Aspects of themselves to selves who are in space and time. The apparitions at Medjugorje thus represent the encounter of their personalities with the vast power of their own psyche and with a multidimensional identity or consciousness, personified in dramatized form according to the ideas of these six young people.

**Construction of the apparitions.** The Marian apparition at Medjugorje would be constructed by the six percipients using energy that is formed into various combinations of atoms and molecules according to data received subconsciously through "inner senses" (J. Roberts, 1970, chap. 19). Each percipient constructs their own apparition in their own personal perspective or space continuum (or what quantum physicists call "Hilbert space" or "fact-space") (Friedman, 1997; Rucker, 1984). There are, therefore, actually six individual apparitions. Percipients only see their own construction; they cannot see one another’s.

There are many factors involved in the construction of the apparitions (J. Roberts, 1997b). Although each percipient can only see his or her own construction, each forms his or her replica of the apparition that would seem to agree with the other constructions in terms of approximate location, form, and even particular color aided by several factors: (a) the transmission of specific details at a telepathic level to the subconscious mind of each percipient from all other constructors, (b) the idea of the Madonna as it currently exists in collective public knowledge with which the percipients are previously familiar, and (c) the density, speed, and vibrations received from the quite real atoms and molecules which combine individually into the more complicated gestalt structure called the Blessed Virgin Mary apparition and that compose the other constructions of the so-called single object.

The individual’s ability to receive these impressions. . . . and his ability to translate them and to construct them, is all determined by his own psychic background in past existences and in the present one, and by his own inner conception of himself, the physical universe, his place in it, and by his inner reactions to ideas. (J. Roberts, 1997b, pp. 175-176)
The Marian apparition, although it has its own sort of form and permanence and is physically oriented, is a construction that does not retain or gain the appearance of physical durability that ordinary material objects possess. The atoms and molecules "which have their own generalized consciousness and capsule comprehension" and that build up the apparent physical image of the apparition move at a slower velocity such that other people are unaware of the apparition as a physical object, though it could be perceived through their inner senses if certain conditions were in effect (J. Roberts, 1997b, p. 193). The apparition cannot operate consistently or endure for any amount of physical time in the physical field because of the absence of greater data, which is the property of the Virgin Mary entity attempting to materialize itself into human form.

In the case of Medjugorje, the inner data is only given to the six percipients. The percipients become more sensitive to such inner data in a dissociated state, regardless of what causes the state to come about. A state of dissociation being achieved opens or makes available lines and possibilities of communication in accordance to the ability of the individual. While instinctively sensing its multidimensional nature, the individual psyches of the six percipients deflect and distort the Virgin Mary entity to some degree and reflect it through their own nature as it expresses itself through them. Imprinted by their psychological field and sifted through the personalities of the percipients, the phenomenon appears in line with the six youth’s ideas of Christianity and personality even though its own reality might exist in different terms entirely.

**How Can the Apparitions Be True and Not True?**

Suppose it turns out that the apparitions of the Madonna at Medjugorje have not occurred in any place or at any time as the six percipients claim and because our species has created the mythology of the Virgin Mary the Mother of God, the Medjugorje youth created the apparitions out of our need. The Marian apparition at Medjugorje which historically may not have occurred as believers say it occurred, nevertheless has a reality, and more than it would have had, had it occurred in so-called historical fact. As Jung (1960) correctly understood, the world of imagination and so-called symbols and myths are in many ways more real than what is often referred to as "sensory-hard" facts or phenomenon we can see, hear, feel, smell, and touch. The characters of a favorite TV program, for example, may attain a level of reality in the mind of its viewers that is more real, tangible, and substantial than the lives of the actual actors who portray those characters. A dream, an idea, a feeling, or a value -- any psychological experience, for that matter -- even though it cannot be scientifically observed in any laboratory and does not take up three-dimensional physical space, definitely exists. And even though it may be born in time, after its conception, it is free from time and is as real as, and in some instances more real than, the chair upon which one sits because of its effect upon our behavior and our mass world.

**The role of imaginative abilities in construction of perceived reality.** It is not sufficiently appreciated how waking experience is directed, cultures and civilizations are formed, and religious and political structures are maintained through the use of our imaginative abilities (J. Roberts, 1981a). Imaginative constructs such as Darwin's theory of evolution, Freud's speculations about the nature of personality, Existentialism's philosophy about the nature of existence, and physical science's "Big Bang" conjecture about the origin of the universe have literally structured generations of people's experience of themselves and their world. The world of the imagination in many ways is the closest we can presently come to the inside of so-called "facts" and the deeper realities from which facts emerge (Brann, 1991).

Jung (1960) recognized that humanity has always projected unassimilated portions of its own deeper psychological reality that is beyond (trans) ego outward, using at various times a variety of images that make up the pantheon of gods and goddesses, good spirits and bad. These projected and personified "forces” have had a very important part to play in the psychological evolution of our species as depicted in mythology (Campbell, 1949). Seemingly outside of the self, our various religious images, symbols,
and ideas of God not only reflect the state of humanity's consciousness as it “is” but also are intended to give conscious direction to the species by pointing toward its desired future state (Armstrong, 1993). Our constructions of God, which arise from deeper dimensions of our species’ nature, act as stimulators of evolution and transmitters for impulses toward “higher” stages of development that are meant to lead the species into its greatest areas of fulfillment (Assagioli, 1991; J. Roberts, 1981b). There is a similar dynamism and vitality operating in the Marian apparitions at Medjugorje.

In certain terms, we can say that the Marian apparitions at Medjugorje are true and not true. As representations of unconscious knowledge, they are true; as representations of physical reality, they are false. When we mistake the symbolic appearance for the reality, we inevitably misunderstand its nature. The Marian apparitions at Medjugorje can be considered in a similar light. They stand for those sensed but unknown glimpses of our own reality that we as a species are determined to explore. The apparitions, in distorted form, reflect those greater actualities of an inner order of being. The problem is in making symbolic personifications literal (for has not science taught us that only "literal fact" is true?) and never looking behind the symbolism of the communication, beyond the inner morality play, for the greater meanings beneath.

Conclusion

Transpersonal psychology studies those experiences and behaviors in which personality functioning extends beyond (or “trans”) ordinary ego-directed consciousness to bring into awareness aspects of reality that exist beyond yet within the world of the five senses. One reason it does this is to assist the field of psychology and other sciences recognize the existence and importance of other realities or fields of actuality which are as yet generally unrecognized, and which are closely connected with the inner workings of the self. As we shall see in this chapter, such efforts have been strongly resisted in the history of modern psychology because the acknowledgement and acceptance of such actualities or realities would shatter the very foundations of knowledge as it now exists (Coon, 1992; Harman & Clark, 1994).

Psychology at the present time insists that physical aspects of experience and behavior perceived by the outer senses are the only ones that exist. Why investigate the reality of a fiction or other fields of actualities when they are not believed to exist to begin with? Yet it is precisely because of this determination to explain all experience and behavior in terms of the data available to the physical senses only, and the failure to acknowledge the existence of other fields of actuality which influence (and are influenced by) the inner workings of the self, that so much of what occurs in life and death seems mysterious, unexplainable, or beyond the realm of what is presented in general psychology textbooks.

By its slavish dependence upon the physical senses as the only source of data about human experience and behavior, mainstream psychology has severely limited the amount of data that it can perceive, inducing a narrow focus of attention along certain limited lines, forcing the conscious mind to limit its comprehension solely within the scope of perceptions received by the outer senses. With a handful of available clues that lead to only dry generalized facts, modern psychology has built an awkward, ill-fitting miniature model of the human being with which it is afraid to part. Because of mainstream psychology’s refusal to pursue the examination of other modes of perception and the existence of other sources of information available to the self other than through the physical senses, the advance of knowledge is curtailed. The study of transpersonal sensation and perception as occurs in so-called extra-sensory perception is a case in point. Mainstream psychology considers parapsychology an isolated, bizarre domain, unrelated to other fields of knowledge and "anomalous" (Cardena, Lynn, & Krippner, 2000). The reason for this is that the data and facts that would connect the study of the workings of the inner, transpersonal self to all other fields of science, and to the study of the universe as it exists in all its levels is not recognized because it is not looked for. It is the inner, transpersonal self with its inner modes of perception (or "inner senses") that is one of the main clues which modern psychological science refuses to recognize, calling it an unreasonable assumption, not willing to examine it for those characteristics which
show it to be the most reasonable and logical of psychological phenomena, and without whose inner vitality no manifestation of body, self, time, world, and others would be possible.

In order to recognize the importance of the existence of transpersonal sensation and perception which is as yet generally unrecognized in introductory psychology textbooks, it is important first to understand the nature of ordinary sensation and perception that relies so heavily upon physical stimuli and sensory apparatus designed to detect and encode stimulus energy into information that the nervous system and brain can organize and interpret through its mind and consciousness. Because modern psychological science is based on empirical (sensory) observation, it is important to learn about how physical stimulation is converted or transduced into subjectively felt conscious experience. We thus started by distinguishing between physical sensation and psychological perception, examined how perceptions arise, and how much we can rely on them (i.e., under what circumstances our perceptions represent a valid, legitimate, and useful picture of the world, and the degree to which our conscious experience of the world differs from what is "already out there now real").

We then proceed edto examine what are called the “inner senses” (Roberts, 1970, chap. 19). The outer, physical senses can be understood as extensions of inner, nonphysical senses. Our inner senses are used in so-called paranormal phenomena, in out-of-body and near-death experiences, for example, and in other projections of consciousness, such as during dreams. The outer senses are designed to give us reliable, accurate, necessary, and beneficial information about the so-called “objective” physical world that is measured by scientific instruments that, like the outer senses themselves, are constructed to detect and encode patterns of sensory data. Nevertheless, their range is restricted and they necessarily narrow attention and awareness, perception and understanding along certain limited lines. Perception, using the inner senses, produces knowledge of events that transcend space and time, and includes so-called “paranormal” or psi phenomena of telepathy, clairvoyance, precognition and retrocognition. We will see that perception without sensation is not only possible but that the scientific evidence supporting such exceptional human experiences is extensive (see, for example the reading list assembled by Murphy, 1992, pp. 590-599, and Kelly, Kelly, Crabtree, Gauld, Grosso, & Greyson, 2007, appendix). As Michael Murphy (1992) states:

Evolution has endowed us with many abilities to sense chemical, electromagnetic, and mechanical stimuli from the external world. Although some animals have sensory capacities superior to ours (such as the canine sense of smell, or an eagle’s distance vision), we have a great variety of visual, auditory, tactile, gustatory, and olfactory abilities, all of which can be strengthened through practices such as hypnosis, somatic education, martial arts training, and meditation. Furthermore, there is considerable evidence that extrasensory perception can be cultivated too. (p. 64)
References


CHAPTER 3 – Transpersonal Sensation and Perception


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Figure 3-1
How Psi Works: Some Interesting Findings

- **Differences matter.** Psi is an ability that differs across individuals. Much like athletic ability or musical talent, some individuals are naturally better at remote viewing than other individuals. “Mass screening efforts found that about one percent of those who volunteered to be tested were consistently successful at remote viewing” (Utts, 2001, p. 121). Rhine’s research showed that the same applies to ESP generally. “The average person off the street could perform ESP; but some people are clearly better than others. ESP is not spread equally among humans. Strong ESP ability is more an unusual talent than an ordinary one” (Schmicker, 2002, p. 65).

- **Some people are “naturals.”** It is easier to find than to train good remote viewers. “It appears that certain individuals possess more talent than others, and that it is easier to find those individuals than to train people. It also appears to be the case that certain individuals are better at some tasks than others” (Utts, 2001, p. 132).

- **More is not necessarily better.** Multiple viewers are not necessarily better, more accurate, or increase the possibility of accuracy through consensus. “Time and again, when there was 80-90 percent consensus, the consensus group proved to be wrong” (McMoneagle, 1998, p. 29).

- **Remote viewers cannot be blocked.** “Electromagnetic shielding does not appear to inhibit performance” (Utts, 2001, p. 121). Joseph McMoneagle (1998), one of the expert remote viewers used in the SRI-SAIC series of experiments states: “I believe that shielding is possible, but only when using a combination of things/techniques not yet explored. There are times when remote viewing just doesn’t seem to work on its own” (p. 33).

- **Feedback Not Required.** Feedback on a target is not a requirement. “Feedback may not be a requirement for the remote viewer to perform. There have been remote viewings accomplished by viewers who died prior to receiving their feedback… However, feedback is absolutely essential for judging or evaluating a report for accuracy” (McMoneagle, 1998, pp. 33-34). Statistician Utts states: “It is not clear whether or not feedback (showing the subject the right answer) is necessary, but it does appear to provide a psychological boost that may increase performance” (Utts, 2001, p. 121)

- **Distance does not matter.** “Distance between the target and the subject does not seem to impact the quality of the remote viewing” (Utts, 2001, p. 121). In one successful remote viewing experiment, the sender visited target sites in Rome, Italy while the receiver remained in Detroit, Michigan (Schlitz & Gruber, 1980, 1981). J. B. Rhine (1937) likewise found that increasing the distance between the receiver and the sender in his telepathy experiments, and between receiver and target in his clairvoyance studies (as far away as 4,000 miles in one study) did not diminish performance, unlike as occurs with our usual five senses.

- **Motivation matters.** Highly motivated, positive, and enthusiastic people have a better chance of producing ESP than someone who does not care about the results. Bored subjects who lose interest in the task perform worse than subjects who enjoy the task. One likely explanation why the 1973-1993 government-sponsored remote-viewing experiments were so successful and did not suffer from J. B. Rhine’s “decline effect” was that the experiments were less boring and repetitive.

- **Stimulants matter.** Drinking alcohol (a depressant) seems to lower scores while drinking coffee or Coca-Cola (a stimulant) appears to raise them.
Believing is seeing. Believers tend to score higher than skeptics. Dr. Gertrude Schmeidler demonstrated that “believers also tend to score higher than skeptics in psychic experiments. Skepticism, doubt and unemotional neutrality apparently work to decrease or eliminate psychic abilities” (Schmicker, 2002, p. 65). Some things you have to believe in order for them to work; in other things belief doesn’t matter, but in psi it does. All things being equal, if you don’t believe you can hit a homer, you probably have a lesser chance than someone who does believe.

Be free. “Free-response” remote viewing (participants are simply asked to describe the target and the target pool is unknown to the participant) is more successful than “forced-choice” remote viewing (there are a small number of known choices from which the subject must choose and is aware of the possible target item alternatives, such as the five symbols in Zener cards, or the four lights in the Schmidt Machine). Although forced-choice response formats are easier to evaluate statistically than free-response formats, the use of force-choice formats “have been traditionally less successful than free-response experiments” in remote-viewing studies (Utts, 2001, p. 112).

Quiet please. ESP experiments such as the ganzfeld, conducted in a relaxed, quiet state of mind produces better results than those conducted under normal waking consciousness conditions, such as Rhine conducted.

Psi improves as GMF fluctuations decrease. “Psi performance is better on days when the earth’s geomagnetic field (GMF) is quiet” (Radin, 1997, p. 178). The most accurate telepathic dreams, for instance, tend to occur during 24-hour periods of quiet geometric activity (i.e., fluctuations in earth’s geomagnetic field as the earth interacts with highly-charged solar particles, sun spot activity such as solar flares, other planets, movement of the earth’s molten core, etc.) (Persinger & Krippner, 1989).

Nobody’s perfect. Information remote viewers receives is not perfect. It often has inaccurate details and information mixed in which accurate information, although accuracy could reach as high as 80% at times. Psychic performance can be compared to sport performance or musical ability that is affected by relative skill, knowledge, attitude, health, emotion, and belief, and level of interest the performer brings to the experiment. Automatic, mechanical repeatability of results should not be expected any more than they are expected from sport players. Failure does not mean earlier successes were necessarily the result of fraud or trickery.


Experimenter effects in psi research. Studies of experimenter expectancy effects show that the testing environment and attitudes of onlookers and scientists running the tests can affect the results (Rosenthal & Rubin, 1978). Tension and hostility toward the test subject can make it difficult for the subject to produce results; treating the person as an unfeeling, inanimate machine can doom an experiment to failure (Honorton, Ramsey, & Cabibbo, 1975). Negative comments and distractions from observers can lower scores. People perform better in front of friendly, supportive crowds. If people want you to fail, let you know they want and expect you to fail and radiate hostility, they can usually affect your performance even without physically touching you. Performing psi for a crowd of hostile debunkers is more difficult than performing before a friendly audience, or a neutral one (White, 1977). Success in psi experiments may even be partially dependent on the psi abilities of the experimenters (West & Fisk, 1953; Kennedy & Taddeo, 1976; Wiseman & Schlitz, 1997).
Figure 3-2
Parapsychological-Related Master's Theses and Doctoral Dissertations

- Adelphi University – Psychokinesis and the mind-over-matter concept.
- Boston University – ESP and mediums.
- California State University at Fullerton – Archaeology and parapsychology.
- California State University at Long Beach – The use of psychics by police as an investigative aid.
- Carleton University at Ottawa – The psychology of people who report having seen a UFO.
- City University of New York – Correlated hemispheric asymmetry in sensory and ESP processing of emotional and non-emotional videotapes.
- City University of New York – Hypnotizability, creativity, and psi in the Ganzfeld.
- Columbia University – The Kirlian (aura) effect.
- Harvard University – A comparative study of medieval, Christian and contemporary accounts of near death experiences.
- New York University – Telepathy between mothers and daughters.
- Northern Illinois University – Meditation and psi performance.
- Stanford University – Lucid dreaming.
- University of California at Berkeley – Possession trances.
- University of California at Berkeley – Psychic readers and human auras.
- University of California at Los Angeles – The psychic reader as shaman and psychotherapist.
- University of Chicago – The seer Edgar Cayce.
- University of Georgia – Clairvoyance and creativity.
- University of North Carolina – Faith healing.
- University of Oklahoma – Philosophical implications of psi phenomena leading to a reconciliation of science and religion.
- University of Wisconsin – History of spiritualism.
- West Georgia College – Testing for a psychokinetic effect on plants: The effect of “laying on of hands” on germinating corn seeds.
- Yale University – The effects of the drugs amytal and dextroamphetamine on ESP.
Figure 3-3. Interesting Websites

www.noetic.org
The Institute of Noetic Sciences founded by former astronaut Edgar Mitchell promotes research and education on mid-body medicine, exceptional human experiences, consciousness studies, and the promotion of global mind change in world civilization.

www.scientificexploration.org
The Society for Scientific Exploration, founded in 1982 by Dr. Peter Sturrock, Emeritus Professor of Applied Psychics at Stanford University, is dedicated to the open-minded and open-hearted investigation of anomalous phenomena that orthodox science has traditionally ignored, denied, or overlooked.

www.princeton.edu/~pear/
The Princeton Engineering Anomalies Research (PEAR) laboratory, founded by Professor Robert Jahn, Dean Emeritus of the School of Engineering and Applied Sciences at Princeton University, has produced strong experimental data for the existence of psychokinesis, precognition, and remote viewing (clairvoyance) since its inception in 1972.

http://hsc.virginia.edu/personality-studies
The Division of Personality Studies, a division of the University of Virginia’s Department of Psychiatric Medicine, supports the investigation of anomalous phenomena related to the mind-body problem and the human personality’s survival of bodily death, including near-death experiences, out-of-body experiences, deathbed visions, spiritual apparitions, and notably the reincarnation research of Ian Stevenson, MD, and near-death research of C. Bruce Greyson.

www.dosseydossey.com
Larry Dossey, MD, is a leading authority on the effect of prayer on physical processes in plants, animals, and humans, mental healing, and faith healing.

www.saybrook.edu
Saybrook Graduate School in San Francisco, California is one of the foremost graduate schools in transpersonal psychology and the home of Dr. Stanley Krippner, leading researcher in parapsychology, notably telepathy and dreams, ancient cultures and psychic functioning, and supporter of international associations of psi research.

www.parapsych.org
The Parapsychological Association, founded by J. B. Rhine in 1957 “to advance parapsychology as a science, to disseminate knowledge of the field, and to integrate the findings with those of other branches of science” promotes the study of psychic functioning through its conferences and the Journal of Parapsychology

www.rhine.org
The Institute for Parapsychology at the Rhine Research Center in Durham, NC is successor to the Duke University Parapsychology Laboratory, the birthplace of experimental parapsychology founded by J.B. Rhine and his wife Louisa Rhine and continues to promote the investigation of all aspects of psychic functioning, including psi in animals, and psi relationship to brain-based processes.

www.intuitionlabs.com
Intuition Laboratories, Inc., established by Dr. Richard Broughton, former Director of Research at the Institute for Parapsychology at the Rhine Research Center and author of the overview of parapsychology Parapsychology: The Controversial Science (1991), is dedicated to identifying “intuitively advantaged individuals” for careers in business, industry, science and education and other professions.
Figure 3-3. Interesting Websites (continued)

www.aspr.com
The American Society for Psychical Research was founded in 1885 to investigate objective paranormal phenomena (e.g. psychokinesis, mental healing, hauntings, apparitions, poltergeists), paranormal cognition (e.g., telepathy, clairvoyance, precognition), and other anomalous phenomena bearing on the question of survival of bodily death.

www.iands.org/
The International Association of Near Death Studies which publishes the *Journal of Near Death Studies* conducts pioneering studies of near-death experiences and psychic phenomena suggestive of survival of bodily death, including apparitions and death-bed visions.

www.nidsci.org
The National Institute of Discovery Science conducts scientific investigations of physical, chemical, biological, and psychological anomalies.

http://issc-taste.org
The Archives of Scientists’ Transcendent Experiences (TASTE) is an on-line journal established by transpersonal psychologist and parapsychologist Charles T. Tart as a vehicle for scientists to report personal occurrences of psychic or transcendental experiences.

www.csicop.org
The Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP) founded in 1976 and publisher of *Skeptical Inquirer* is devoted to the skeptical debunking of all psi phenomena.

www.parapsi.com
Michael Grosso, parapsychologist who has published extensively on research evidence for the survival of bodily death has his own website on which his publications are available.

www.tricksterbook.com/ArticlesOnline/
George P. Hansen, parapsychologist who has published work about the anti-paranormal crusade of CSICOP over the years makes his historical research available to the public on this Website.

http://ncam.nih.com
The National Center for Complementary and Alternative Medicine created by the U.S. Congress in 1992-1998 to formally evaluate alternative and unconventional medical treatments presents the results of its formal studies of mind/body interventions including hypnosis, meditation, biofeedback, laying-on-of hands, and so forth.

www.science-frontiers.com
William Corliss, founder of one of the many societies based on the work of American iconoclast Charles Fort (1874-1932), has catalogued unexplainable phenomena that do not fit established scientific theory and presents his multi-volume work on this Website.

www.lfr.org/csl
Cognitive Science Laboratories, under the direction of Dr. Edwin May, continues the remote viewing experiments begun in the 1970’s as a part of the government-sponsored program “Star Gate” and access to published papers.

www.boundaryinstitute.org/experiments.htm
Parapsychologist Dean Radin, author of *The Conscious Universe: The Scientific Truth of Physic Phenomena* (1997) provides access to published research on the many meta-analytic studies conducted on various mind-body interaction (PK) experiments at various laboratories around the world.
**Figure 3-3. Interesting Websites (continued)**

**www.nderf.org**
The Near Death Experience Research Foundation, created and run by Jeff Long, MD, Director of IANDS, provides one of the largest online collections of personal accounts of near death experiences currently available.

**www.paradigm-sys.com/cttart/sci-docs/**
Parapsychologist Charles T. Tart’s website provides access to his published research of psi-related phenomena.

**http://www.tcom.co.uk/hpnet/houck.htm**
Jack Houck, a systems engineer with a California aerospace corporation, has been involved in remote viewing and PK research and presents his conceptual model for paranormal phenomena and techniques for producing PK in large groups.

**www.icrl.org**
The International Consciousness Research Laboratories is a consortium of research scholars in anthropology, archeology, biology, engineering, physics, psychiatry, and psychology who study the role of consciousness in the creation of physical reality.
Studies Providing “Best Evidence” for Authenticity of Psychic Functioning


In order to use the Inner Senses you must momentarily turn your attention away from the constant activity that is taking place before your eyes -- turn off the physical senses, as it were -- and switch your attention to those inner events that have escaped your notice.

**Directions:**

1. Pretend that you are on a lighted stage, the stage being the room in which you now sit. Close your eyes and pretend that the lights have gone off, the setting has disappeared and you are alone.
2. Everything is dark. Be quiet. Imagine as vividly as you can the existence of inner senses. For now pretend that they correspond to your physical ones. Clear from your mind all thoughts and worries. Be receptive. Very gently listen, not to physical sounds but to sounds that come from the inner senses.
3. Images may begin to appear. Accept them as sights quite as valid as those you see physically. Pretend that there is an inner world, and that it will be revealed to you as you learn to perceive it with these inner senses.
4. Pretend that you have been blind to this world all your life, and are now slowly gaining sight within it. Do not judge the whole inner world by the disjointed images that you may at first perceive, or by the sounds that you may at first hear, for you are still using your inner senses quite imperfectly.

Do this simple exercise for a few moments before sleep or in the resting state. It may also be done even in the midst of an ordinary task that does not take all of your attention. You will simply be learning to focus in a new dimension of awareness, taking quick snapshots, as it were, in a strange environment. Remember that you will be perceiving only snatches. Simply accept them, but do not attempt to make any overall judgments or interpretations at this stage. Ten minutes a day to begin is quite sufficient.
CHAPTER 3 – Transpersonal Sensation and Perception

Figure 3-4 (continued)
Psy-Time (Inner Sense #2)
(Roberts, 1970, p. 256)

Directions:
1. Sit or lie quietly alone and close your eyes. Pretend that there is a world within as vivid and real as the physical one.
2. Turn off your physical senses. If you want, imagine that they have dials and you flip them off, one by one. Then imagine that the Inner Senses have another set of dials. Imaginatively turn them on. This is one method of beginning.

Directions:
1. You may, instead, just lie quietly and concentrate on a dark screen until images or lights appear on it. Do not concentrate on worries or daily trivia that may arise as soon as you block out physical distractions. If such thoughts do come to the foreground of attention, then you are not ready to proceed. You must first get rid of them.
2. Since we can't concentrate fully on two things at once, you may focus your attention on the screen again or on any imaginary image -- this will banish the annoying worries. Or you may pretend that the worries themselves have images and then 'see' these vanishing away.
3. At a certain point you will feel alert and conscious but very light. Within your mind you may see bright lights. You may hear sounds or voices. Some may be telepathic or clairvoyant messages. Some may simply be subconscious pictures. As you practice, you will learn to tell one from the other.

Gradually as you progress, you will feel apart from time as we know it during the exercise. You may have various kinds of subjective experiences, from extrasensory episodes to simple periods of inspiration and direction. I sometimes have out-of-body travels, for instance, during PsyTime. This sense leads to refreshment, relaxation, and peace. It can be used in many ways, for different purposes.