

B – THE DELAYED-CHOICE EXPERIMENT

One of the world's foremost quantum physicists, John Archibald Wheeler,* proposed what he called, the *Delayed-Choice* experiment to determine if indeed there could be some information transferred to the electron as it approached the slit plate. This information as to whether one or both slits were open, could be “used” by the electron in determining which slit or slits to pass through⁽¹⁾.

Let us look closely at Figure (15-13). A single quantum of energy, a photon, in the upper left-hand portion of the figure is directed toward a half-silvered mirror (beam-splitter A) at a pulse rate of, say, one photon/second. The mirror is coated with just enough silver to reflect half of the photons impinging on it, and transmit the other half. If the photon is *transmitted* through beam-splitter A, it will continue on downstream, reflect off mirror # 1 and be recorded at photon detector # 1. If the photon is instead *reflected* at beam-splitter A, it will reflect off mirror # 2 and be recorded at photon detector # 2. We can tell which path the photon has taken - path A-1-1, or path A-2-2 - by observing which detector counter responds after the light is pulsed and has traveled a path to the detector. We notice that a single pulse of light (one photon/sec) *never* causes simultaneous detector responses because the photon takes only one path in its traversal through the apparatus, and is recorded at a constant intensity (Note here that path lengths, A-1-1 and A-2-2 are equal in length).

Now, let us slightly modify the experiment. *After* the light has either been reflected or transmitted at beam-splitter A, we insert a second beam-splitter (B) directly in front of the two detectors as shown in the Figure. This beam-splitter is inserted after the light has been calculated to have been reflected off either mirror # 1 or mirror # 2, *but has not yet reached the detectors*. This second beam-splitter is positioned in time to intercept the incoming light. It is situated such that if light *beams* were coming along both paths, constructive interference would occur on the side of beam-splitter B facing photon detector # 1; while destructive interference would occur at the beam-splitter B-side facing photon detector # 2. The interference would occur because the optical path lengths of the two paths are in phase (one wavelength difference) at the side of the beam splitter facing detector # 1, and 90 degrees out of phase (1/2 wavelength difference) at the side of the beam splitter facing detector # 2. Therefore, there would *always* be a reading at detector # 1, and *never* a reading at detector # 2 (Remember that *destructive* interference cancels the beam intensity). But what we always see with a single quantum or photon pulse of

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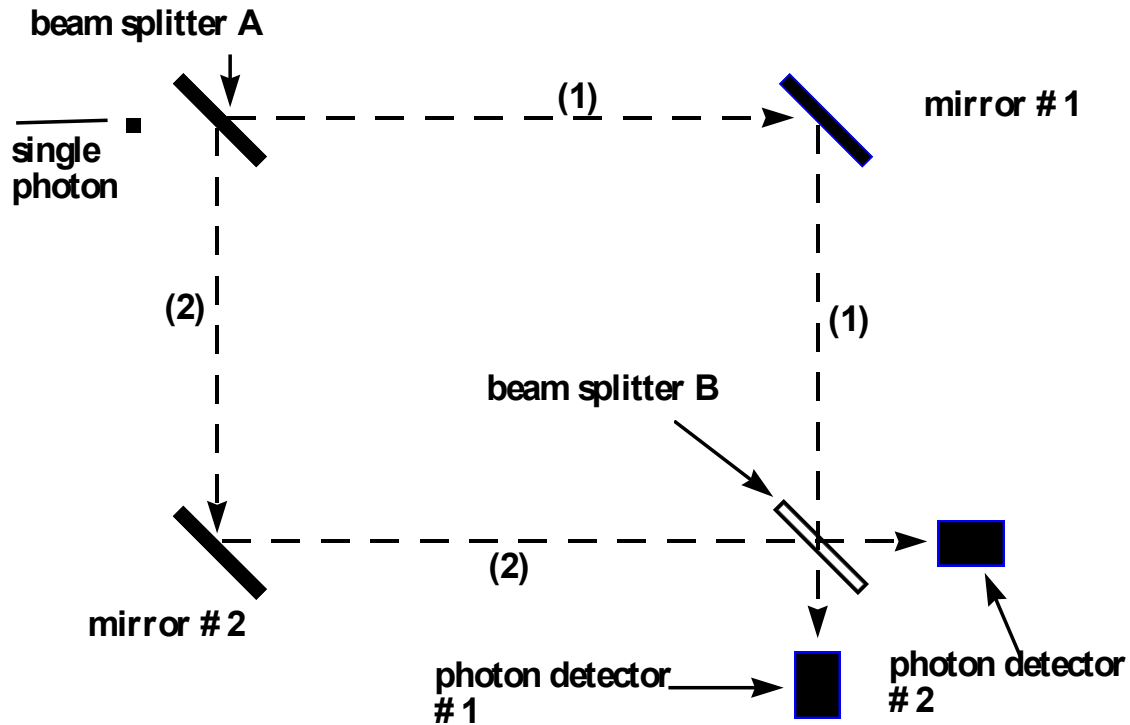


Figure (15-13)

Experimental Set-up for the Delayed-choice Experiment

light (with beam splitter B inserted at the last moment), is a full intensity reading at photon detector # 1, and no reading what-so-ever at photon detector # 2! *It appears that by deciding at the last instant to insert the second beam-splitter, we have decided whether the photon has traveled by one path to the detectors, or has taken both paths - after it has already traveled a specified route!*

John Wheeler said, in speaking about the experimental results, “We now, by moving the mirror [beam-splitter B] in or out, have an unavoidable effect on what we have a right to say about the already past history of the photon”; and “No elementary phenomenon is a phenomenon until it is a registered [observed] phenomenon.”⁽²⁾

In conclusion, if there is no second beam-splitter in the apparatus, the single quantum of light takes one of two possible paths and registers at either detector # 1 or detector # 2. But, if the second beam-splitter is inserted at the last instant, the photon acts like a wave that has split into two wavelets which travel downstream via two paths and interfere with each other at the second beam-splitter. In the first instance, the light acts like a particle, because we are “looking for it” with detectors. That is, we are trying to localize the particle by determining which path it took. In the second instance, the light exhibits wavelike aspects, because we have decided to allow the light to travel unobserved. We have allowed the light to travel and have the opportunity to interfere before it reaches the detectors.

But how can a photon initially take *one* path, with no second beam-splitter in place, and then take *both* paths when a second beam-splitter has been inserted at the last instant *after* the photon has already begun its travel down *one* path? We conclude that we

simply cannot say the photon traveled a given route to the detectors. Physics cannot explain or say with certainty where the next photon or electron will go in the *Double-Slit* experiment; nor, for that matter, when a radioisotope atom will emit a sub-atomic particle. As Wheeler implies, the results of the experiments depend on the “questions we put,” or on the experimental conditions we set up, or on the method of measuring we select. We - the observers - play a role in the results we see from experiments with sub atomic particles. Physical reality, it would seem, becomes a matter of observation as well as statistical probabilities.

Consider the implications of the *Delayed -Choice Double-Slit* experimental results: Wheeler proposed examining the light from a distant source in space, such as a *quasar*. A quasar is thought to be a bright nucleus of a galaxy, which perhaps contains a massive black hole at it's center, and which is believed to be responsible for the intense light emanating from a relatively small region of space. Stellar matter is thought to be sucked into the hole, giving off high-energy photons just before it disappears into the hole.

A quasar, designated as *QSO 095 +561*, has been found to be almost directly in line with a nearer galaxy, such as shown in Figure (15-14). The quasar is billions of light years from Earth, while the galaxy is about one-fourth the distance of the quasar from Earth.⁽³⁾

E - THE EPR PARADOX *

Albert Einstein did not like the implications of quantum theory, even though as we have seen, he was largely involved in the discovery of the fundamental principles governing the theory. Einstein believed that the description of reality as given by the *Copenhagen* interpretation of quantum theory was incomplete. A reasonable definition of reality as stated by Einstein, Nathan Rosen, and Boris Poldolsky in their paper (the *EPR* paper) presented in the *Physical Review*, May 15, 1935, was, "If, without in any way disturbing a system, we can predict with certainty (i.e., with probability equal to unity), the value of a physical quantity, then there exists an element of physical reality corresponding to this physical quantity." ⁽¹⁾ The assumption that objects possess a reality independent of observation has been called, "realism".

Although Einstein believed that it was impossible to measure any physical property (such as position), without affecting the measurement of another property (such as momentum), he could not accept the *Copenhagen* interpretation that a particle such as an electron did not simultaneously possess a definite position and momentum, even if these properties could not be measured precisely. Quantum theory denied objective reality to a particle's position or momentum until that physical characteristic had been measured. If the position were measured, one could not attribute any reality to the particle's momentum, and the choice of which physical property was to possess objective reality was left to the observer and not to the particle itself. The accuracy of any measurements made, however, still fell within the constraints of the *Uncertainty Principle*.

But in addition to his objection to the quantum theory denial of objective reality, Einstein had a conviction of the principle of "local causality" - that an object situated a distance from a local object cannot instantaneously influence or affect in any way the local object. That is, no influence can propagate faster than the speed of light. The assumption that no influence can travel faster than the speed of light has been called "local causality," "locality," or "Einstein Locality."

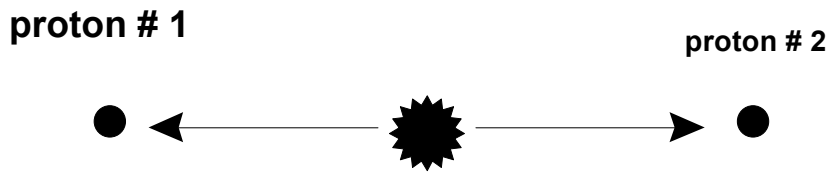
A third assumption for the interpretation of reality is based on the legitimacy of forming conclusions based on a series of experiments that yield consistent results, and has been called "inductive inference." These three assumptions collectively form a basis for "local realistic" interpretations of the world around us. ⁽²⁾

EPR proposed a thought experiment that was intended to prove that it was possible to predict either the position or the momentum of an object without disturbing it. If this could be accomplished, reality would then be seen to be objective, and a particle would possess physical characteristics independent of observation. But if reality were seen to be objective, and *if* quantum theory was complete, then there should be no way of predicting both of these properties without disturbing the particle; and this could only happen if one assumed non-local effects (faster than light influences) - something which

* Named after Albert Einstein, Nathan Rosen, and Boris Poldolsky.

Einstein could not accept. Einstein therefore concluded that quantum theory must be incomplete.⁽³⁾

The argument went as follows. Consider one possible example of the *EPR* thought experiment: A stationary atomic reaction occurs in such a manner that two protons fly away in opposite directions. By the conservation laws, the total momentum of the two particles is conserved. In this example, each particle has the same momentum - equal in magnitude but opposite in direction, so that the net momentum is zero, as shown in Figure (15-20).



- (1) - momentum (P) of proton #1 and proton # 2 are equal and opposite in direction.**
- (2) - Measure P1...We now know $P_1 = - P_2$, without disturbing**
- (3) - Measure the position of proton # 2.**
- (4) - We now know, at this precise instant, the position and momentum of proton # 2, an act which would be a violation of the *Uncertainty Principle***

Figure (15-20)

***EPR* Interpretation of Quantum Mechanics**

According to *EPR*, if one would measure the momentum of proton # 1 after it has traveled downstream some distance, it would seem we would instantaneously know the momentum of proton # 2. Although proton # 1 was disturbed by the measurement it would not matter, because proton # 2 has not been disturbed by the proton # 1 measurement. (Also, since the atomic reaction is symmetrical, both particles will have moved the same distance from the origin of the reaction, so if we instead had measured the distance proton #1 has moved from the reaction, we could deduce the distance of proton #2.)⁽⁵⁾

Now, after we have deduced the momentum of particle #2 without disturbing it, we can measure its position. At that precise moment, we have determined both the

position and momentum of particle #2, an act which would violate the *Uncertainty Principle* which was part of the *Copenhagen* interpretation of quantum theory. This theory describes physical reality through wave functions. A wave function can be constructed to describe the state of the two protons including the sum of their momenta. This *total* momentum is considered real, although the individual momenta are indeterminate.⁽⁶⁾ As long as both protons remained unobserved their properties, such as, position and momentum are uncertain and are the results of a superposition of all possible states given by the wave function for the proton pair. This means that each proton has some potential for being located in any direction, and can be thought of as being smeared out over a large region of space. According to quantum theory, the correlation between the two particles' positions and momenta immediately after the reaction continues to exist as the particles move away from each other, but once a measurement has been made on one particle, and its momentum has been affected to some unknown degree, this very act of measurement will also affect the momentum of particle # 2, so that the net momentum remains the same (in this instance, zero). This has been called *quantum entanglement*, the result of the creation of a two-proton pair due to the atomic reaction.⁽⁷⁾ The created proton pair is called a *singlet state*. In 1964, John Bell of *CERN (European Organization for Nuclear Research)* proposed a method for determining whether the two protons had objective reality, or whether they (or their physical attributes) were indeterminate until a measurement had been taken. As a result of Bell's work it can be shown that if quantum theory is correct, then the distant particles will display a different degree of correlation of certain physical quantities. A lesser degree of negative proton-spin correlation with increase in angle between the two distant proton spin detectors would be predicted by quantum theory than by statistically-real particle theory predictions. See Figure (15-24).

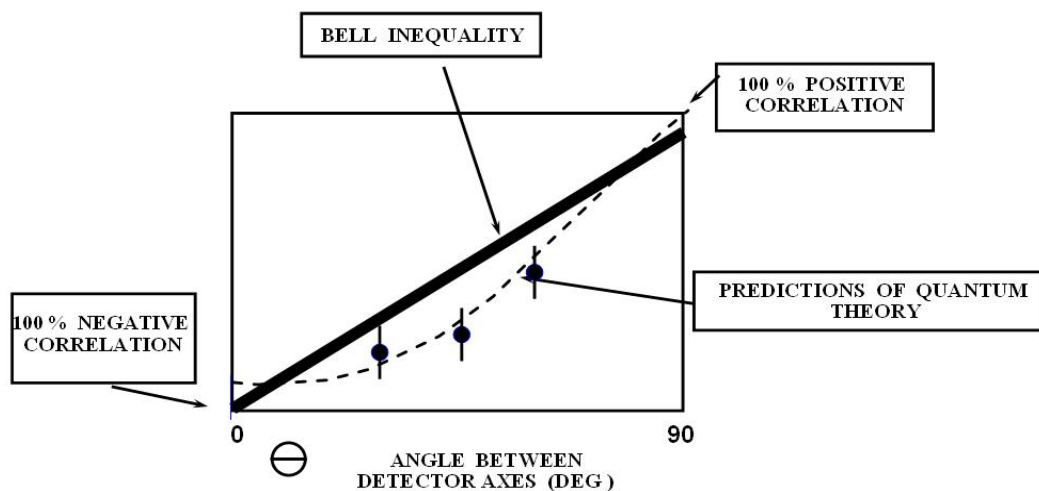


Figure (15-24) Experimental Results Indicate Bell's Inequality is Violated

The degree of proton spin correlation with change in the angle between the widely separated detectors, as predicted by classical (non-quantum) theory is shown by the solid straight line; and that predicted by quantum theory by the curved dotted line. The experimental data indicated by the small dots with vertical error bars follow closely the quantum theory prediction. Experimental results appear to validate the predictions of quantum theory, and the conclusions that the doctrine of Einstein local reality is false; that is, reality is *non-local*. Some physicists also claim that the results indicate that reality is *non-objective*: quantum particle properties have no objective existence unless observed. The observer by changing the orientation of his spin detector at proton #1 brings into existence different spin component values for distant proton #2.

See APPENDIX I-15B (p. 140) for detailed discussion of the *EPR* Paradox, and also Experiments in Quantum Teleportation

CHAPTER 9

THE NATURE OF REALITY

THE SLEEPING DREAM

Recently, during the period I was drafting this manuscript, I had a dream. A vivid dream in *color*, which according to people who research these things is a somewhat rare phenomenon. I was flying in a military airplane that had no less than 36 piston-driven propellers (definitely a dream)! We were flying *inside* what must have been a huge cave whose entrance (or exit) was located very high up (about thirty thousand feet) on the side of a canyon wall. As we exited the cave, I suddenly exclaimed, "*Oh!*" as I saw for the first time the scene outside the cave. The view was absolutely spectacular, and incredibly beautiful and magnificent in grandeur and immensity. Stretching away from me and curving in a graceful arc was the top of the canyon walls, aglow in a rich, reddish brown. The entire scene was rich in many colors and I observed it in minute detail. It has only been on rare occasions that I have recalled a dream in color, *and with such clarity*. I do not believe that I have ever witnessed a more splendid scene in my so-called waking life; yet all that I experienced was *mental* - It all occurred in thought or consciousness. Shortly after this view, I awakened. I asked myself how the human mind could conjure up such a scene, with no external data inputted by the physical senses; that is, the eyes. And how was it possible for me to view this scene - which I had never seen before - with such clarity and sharpness of focus? Since then, on a number of occasions, I will *awaken* in the dark morning hours - *and with my eyes still closed* - see some image, such as a green and white striped box with black letters on one side. I will see the object hanging in space in perfect detail - as perfect as if my eyes had been open.

Richard Feynman, the famous theoretical physicist mentions in his book, *Surely you're Joking, Mr. Feynman!* (p-51) ⁽¹⁾ that he was curious about how in some of his dreams he could see images in perfect detail (such as seeing each hair on someone's head) with his eyes closed. He decided that when you are awake with your eyes open, there must be an "interpretation department" of consciousness that takes the series of nerve discharges in the brain and tells you what you should be seeing. In the case of dreaming this department is still working, but is determining the "random junk" entering the brain as a clear and detailed image.

Nevertheless, these experiences show that what we see depends on how we interpret reality. If we can interpret random electrical impulses (eyes closed) as some physical object, when there is none, this proves to me that "educated" thought is the "interpreter". It does not require electromagnetic irradiation or electrical impulses from the brain in order to see. We do not see what is called "external reality" with our eyes closed because we have been educated to believe that we need organized matter in order to see.

When I am not in bed dreaming, or with my eyes closed, I require a strong prescription in my eyeglasses at this time of my life in order to see things in focus. But

this is merely a false belief about sight. It is not the eye that sees. Seeing is a mental phenomenon.

THE WAKING DREAM *

The senses do not report reality. A rapidly changing pattern of colored dots of varying light intensity and hue appears on the screen of your television, and reproduces in marvelous detail the moving image of, for example, a baseball game. Video conferences are now routinely held between companies located at great distances from each other. Here, a person located in Tipp City, Ohio sees on a large screen the image in "real time"^v of a person in Cincinnati, and interacts with the image, speaking to it as if he and the image were in the same room. We may even forget for a moment that all that we are perceiving are tiny dots on the screen, spaced so closely together that they form a distinct image to the eye. When sophisticated holographic images become a reality, the illusion of thinking we are directly seeing and hearing a person will be almost complete.

THE EYE, MACROSCOPIC OBJECTS AND HUMAN PERCEPTION

We have discovered that the detection of sub-atomic particles depends in some measure on the state of consciousness and intent of the *observer*.^o But what about the so-called direct perception of macroscopic, inanimate material objects, such as a house?

Light is incident on the material object, and is reflected onto the eye's retina. That is, an inanimate matter-particle (a photon) becomes a messenger to convey information or data about the matter-house to the matter-eye. Then electrical pulses (matter-electrons) become messenger particles that travel up the matter-optic nerve to convey information about the image formed on the retina of the matter-eye to the matter-brain. But the brain, being made of matter like the eye, cannot see matter. This chain of "information transfer" must break down at this point, because it is here that the unconscious matter-brain^{**} must somehow convey information to non-quantum, non-material mind. But this would appear to be *impossible*, because there is no physical force that causes the transfer of information from matter (material) to mind (mental).

It would be possible for matter to transfer information or knowledge to mind only if matter and mind are one and the same. That is, *unless matter and mind are different*

* In discussing the relationship between reality, dreams and illusions - which cover the next few pages - it is important for the reader to appreciate, if not agree with, the author's deep metaphysical position, based on the teachings of *Christian Science*, that - at the highest level - man has not fallen out of the grace of God, nor is he dreaming he is a mortal. Rather, what must be addressed in any discussion of reality is the *belief* that man is dreaming he is a mortal and that he has fallen out of the grace of God!

^v Close to "real time". It takes about one quarter of a millisecond for a television image to be sent about 50 miles, traveling at the speed of light.

^o Many physicists would object. They would say that all that is required to cause the wave function of an object to collapse is to have the object interact with a camera, a photographic plate or simply the environment of the experiment. But we have no knowledge of any object in the universe without consciousness. The implication is enormous: no event occurs (has any meaning) without the involvement of consciousness.

^{**} I maintain that there is no conscious matter, therefore no conscious matter-brain.

mental states of consciousness. Not states of matter described by a wave function, but mental states of human consciousness. “An image of mortal thought reflected on the retina is all that the eye beholds.”⁽²⁾ Therefore the measurement chain in matter ends with mind, and the eye/mind loop (See Figure (9-1) is a creation of this mind or of collective consciousness.

Recall in Part I of this book we discovered that at the quantum level we are dealing with effects without knowable direct physical causes. Sub-atomic matter particles are described as having potential or probability for existence (“being and becoming”). Does not the potential for what is called (or what is perceived as) physical existence “exist” as an idea in the non-material or mental realm of mind? The record of the material sensor (atom, Geiger counter, eye), is the *self-testimony of mind or minds*. And what determines what the mind will see? The mind, itself – not electrical impulses - interprets what it will see.

In the sleeping dream we see our thoughts, sometimes as clearly as when we are awake (see “The Sleeping Dream” on the first page of this Chapter). Who is to say that in what can be called the “waking dream” that we are not also *seeing* our thoughts, and *feeling* our thoughts?⁽⁵⁾ And the outcome of this thinking depends greatly upon whether the thoughts are fearful, hateful, or loving and peaceful.

We do not say that matter feels pleasure or pain, or that matter can think; it is the human mind that does this. Neither should we say that the eye, being matter, sees. It is the human mind that believes it sees matter.

Thus, we can appreciate that the eye/mind is actually a *closed loop system* as shown in Figure (9-1). Since *matter is the subjective state of mortal mind*, it is this collective thought that is “perceiving through its own self-organized apparatus [the eye and optic nerve] its own creation or misperception of reality.”⁽⁶⁾ And Eddy said that this so-called mind “sends its dispatches over its body, but this so-called mind is both the service and the messenger of this telegraphy.”⁽⁷⁾

As illustrated in the Figure, the senses – *alias*, mortal mind(s) - deceive. “Garbage in (thoughts entering consciousness such as fear, ignorance, hate, greed, etc) leads to garbage out” (the external world manifested as evil deeds, disease, death, chaos^v). *Reality is seen to be mental*. The external material world as reported by the senses does not exist.
* Our senses interpret reality based on the mind's acceptance of the present reality paradigm. Wolf has said, “...we have come to agree with each other just what those senses are supposed to sense.”⁽⁸⁾

SPIRITUAL SENSE

But if the senses do not accurately report reality, would not this leave us in a hopeless situation of not knowing what is real and what is not? Would we never know the true laws governing man and the universe, and the nature of man? The answer is that we have *spiritual senses*: “a constant and conscious capacity to understand God...” it is

^v By no means is everything perceived with the so-called physical senses “ugly” and “evil!” But in the degree that they manifest finiteness, limitation and inharmony, they fall short of reflecting the Divine.

* But before mankind can demonstrate the total unreality of matter, it must first learn to *subjugate* it, and this can be best accomplished through spiritual healings and lives lived in the progressive demonstration of spiritual reality.

the discernment of things that are “good and eternal” (Eddy, *Science and Health*, pp. 209, 269).⁽⁹⁾⁽¹⁰⁾

**** Blind Girl**

A man knew a little girl who had a condition of extreme mental dullness and who could not see because of – according to medical science – an optical difficulty that rendered her eyes useless. (See Noel D. Bryan Jones, “I See!”, *Christian Science Journal*, December, 1946.)⁽¹¹⁾ After being in the care of *Christian Scientists* for a few years who prayed for restoration of her sight, she presented an entirely different picture. “She was bright, charming, unusually intelligent, could see perfectly even at a distance, and was accomplished at drawing, painting, and fine work. But at that time her eyes were in the same condition as when I [the author] had previously seen her, showing no signs of performing their natural functions. *She was literally seeing without the use of her eyes*”^{*} (emphasis added). When the author of the article inquired a few months later, he learned that the eyes were functioning more and more naturally. The author said, “It had been proved that the physical organs performed their natural function because of what the child spiritually saw concerning true vision.” That is, man sees spiritually without the uses of material eyes. It is only mortal thought that believes that damaged material eyes need to be repaired in order for vision to be restored.

---Child-like Thought

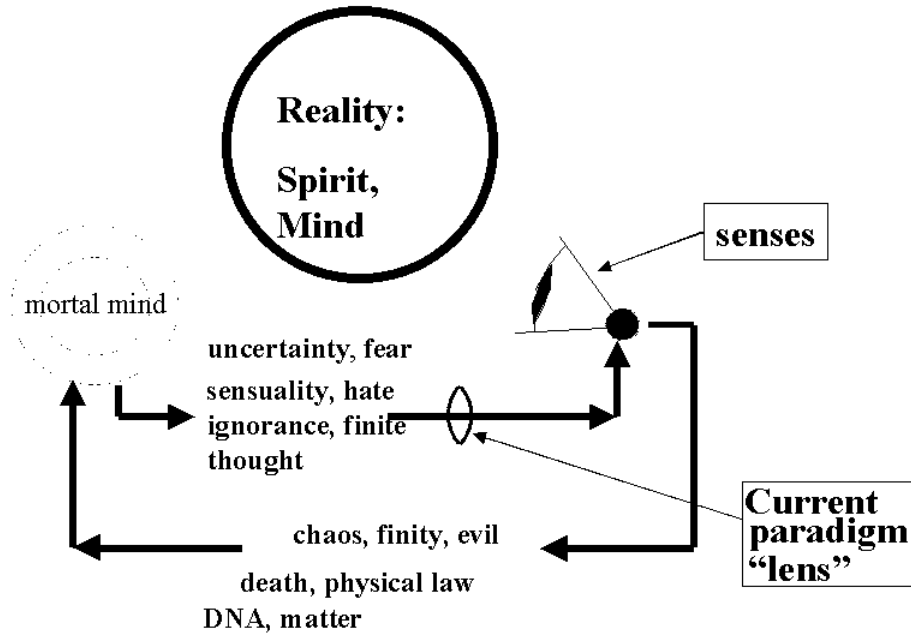
At first, I hesitated about including the above healing experience because I was anticipating a strong negative reaction to the claim that someone could see with useless eyes; that is, that it would be possible to see without material eyes.^v But I have little doubt the healing occurred as related. Christ Jesus once said to doubters, “Having eyes, see ye not...”⁽¹²⁾ implying that their lack of understanding of the nature of God and His reflection, man, prevented them from seeing, experiencing and acknowledging the divine power and spiritual reality. It should also be apparent to the reader that child-like receptivity to spiritual truths - not faith grounded in materiality and material laws - contributed greatly to the healing.

The above anecdotal experience of literally seeing without eyes illustrates that it is the change in the state of consciousness, not the change in the state of a material body,

* The author of the article, Noel D. Bryan-Jones was a lecturer, examiner and member of the *Council of the British Optical Association* after qualifying for the *Fellowship of the British Optical Association*, and before he became a *Christian Scientist*. (He later became a *Christian Science Practitioner* in 1957). He could therefore verify that the girl’s eyes were useless before prayer was taken up. The article was later published in pamphlet form.

^v The Catholic church recently canonized Padre Pio, who in 1947 reportedly healed a blind girl who was born without pupils. Doctors had declared that nothing could be done about her blindness. The girl’s grandmother, a woman of great faith, took the girl to Padre Pio for help. He touched her eyes and blessed them. In a very short time she could see clearly. Eye specialists examined her eyes, but even though she still had no pupils, she continued to see.⁽¹³⁾

that results in healing and a restoration of harmonious action. If a change in the state of consciousness occurs as the result of thought becoming more in unity with the divine Mind or Soul, then this would be enough for harmony to be seen and experienced. But the human mind eventually desires to see a subsequent change in matter. Therefore, in line with humanity's acceptance of the laws of matter, mortal thought eventually brings the body into accord with what is considered to be the normal condition for harmony to be demonstrated; that is, the eyes were restored to normal functioning.



A distortion of reality: “Mortal mind sees what it believes as certainly as it believes what it sees.” (M. B.E., “Science and Health with Key to the Scriptures”)

Figure (9-1)

A Distortion of Reality: The Relation Between Mind, Matter and the Senses

VIRTUAL REALITY

“An image of mortal thought, reflected on the retina, is all that the eye beholds.”⁽¹⁴⁾

Mary Baker Eddy

It is now possible with sophisticated computers and imaging technology to fit a subject with specially designed headgear which incorporate goggles. Through the electronically-operated goggles, images are projected onto the retina of the subject. The

images may be what a pilot would see if he were flying an airplane. If the pilot turns his head to the right he will look out of the airplane window and see the right wing. If he turns 180 degrees in his seat he will see the back of the plane. If he operates controls next to his hand he can move the plane up or down, and the view out of the cockpit window - his visual scene - will show the landscape decreasing in size as the airplane elevation increases. He can fly past mountains and look back at them as they pass by. At present the images projected onto the eye, having been stored as bits in a computer, have only moderate resolution and are flat. But future technological advancements, including three-dimensional imaging, could make the scene take on a greater sense of reality.

Let your imagination run wild and suppose that we have been secretly fitted at childbirth with highly sophisticated contact lenses instead of goggles. The lenses are connected via microcircuits to an advanced nano-computer which has been surgically installed inside the head, and in which is stored a program to display a set of real time images a person might see as he moved through his day, walking and performing daily functions. Upon command of the subject - turning of the head or movement of the arms or legs - the visual scene of the subject would change accordingly. Imagine further that two other senses, hearing, and the nerves governing the physical sensations of touch were also connected in some way to the computer. This may seem far-fetched in the early years of the Twenty-first century, but it may be possible to accomplish this in the next 25 to 50 years. If such a thing were possible the subject could be strapped to a chair, and by the movement of his head, fingers, and by the slight movement of arms and legs (actually muscle contractions), he would receive a sensory feedback (visual, auditory and sensation) from the computer that would give him the illusion (a virtual reality!) that he was walking through a room, climbing stairs, piloting an airplane, while all the time he was strapped in a chair! *

Who is to say with absolute confidence that our mortal experience - or at least the *foundation* of our mortal experience; that is, - what we experience through the five senses - is not “programmed” by collective mortal consciousness? Not by a surgically-installed computer, but by our unconscious or ignorant acceptance of the world’s created paradigm for reality. Our individual experiences, occurring within the constraints of the universally-agreed-to physical paradigm, would be in accord with our individual desires and intents. May not our human experiences be a little like virtual reality experiences?

What a horrible thought, you say! But much of our human existence is filled with experiences we cannot attribute to a compassionate and wise Creator. Christ Jesus, himself said, “Having eyes, see ye not?”⁽¹⁵⁾ implying that it is not the eyes, but consciousness that must be changed in order to perceive reality. And Eddy has said that it is our spiritual senses (spiritual capacity to understand God or Reality) that “lifts human consciousness into eternal Truth.”⁽¹⁶⁾

* In like manner it conceivably might be possible to physically “stretch” each of the brain’s five senses (the body being located in Dayton, Ohio) by connecting them directly to long circuits (miles in length), such that at the end of each circuit the sensors of seeing, hearing, touching, etc, would be located fifty miles distant inside a very small box in Cincinnati. There would be no real purpose in doing this, but it further illustrates the illusion of a conscious being whose body is physically located in one place (Dayton) while his consciousness appears to be somewhere else (in a very small box in Cincinnati).

Our “*salvation*” then, would be the recognition that reality is not accurately discerned by the five senses, but must be perceived through our individual spiritual and innate capacities to understand and live in accordance with spiritual truths and laws, and to receive the tangible ideas of Mind. * In the degree that we do this, spiritual reality becomes more substantial and real than the reality of the physical senses. And our human experience should eventually come into agreement with our spiritual insight, and manifest more harmony and order.

THE WAKING DREAM (HYPNOTIC ILLUSIONS), AND FACE CANCER

The following incident gives further proof of the illusions of the physical senses; that is, the human mind: A man had a very good friend who was an expert hypnotist. The hypnotist had told the man several times that some day he would hypnotize him; and each time the man would good-naturedly scoff at this idea. ⁽¹⁷⁾ One day the two men were having dinner at a local restaurant. The man ordered lamb chops. When the waitress brought his dinner to the table, the man looked at his plate and said, “Just a minute, Miss. You've made a mistake in my order. I ordered lamb chops, not watermelon.” The waitress said, “What watermelon?” He replied that he was referring to the slab of watermelon resting on his plate, and held it up for her to see. She asked the man if he were trying to “put her on.” He said that he was not trying to do that, but he knew that he had ordered lamb chops, but here, resting on his plate, was the red watermelon instead.

The waitress and the man continued to disagree about what was resting on the plate, until the man noticed out of the corner of his eye that his friend, the hypnotist, was smirking. At that moment he realized he had been hypnotized! After this realization dawned upon his consciousness, he again looked at his plate - the illusion or *spell* had been broken - and this time he saw the lamb chops. He apologized to the waitress rather shamefaced.

FACE CANCER

Later in the day, the man went with his mother to visit an aunt who had a cancer of the face so severe that she felt she could no longer be seen in public. He had shared the experience about the watermelon before they went to visit the aunt. As they walked into her room, he caught a glimpse of her face all covered with the growth, and he turned to

* Spiritual laws and the *Correspondence Principle*: The *Correspondence Principle* of physics says that any new theory must reduce to a corresponding, well-established classical theory when the new theory is used in the domain of the less general classical theory. We cannot say the same about what are called spiritual law. Spiritual laws cannot be reduced to physical laws, and cannot explain physical phenomena. Nor can the reverse be said to be true, because these laws are diametrically opposite in nature. Spiritual laws are the laws of Mind and exist “outside” or beyond the realm of matter and space-time. Physical “laws” can, and are, subject to change. There is hardly a fundamental physical law that has not been modified or changed during the last 150-200 years. Some interpreters of reality believe that material laws, matter, and mortal thought represent different levels of human belief (the observed and the observer, respectively), and therefore, in the final analysis, are not elements of a permanent reality. They believe that any definition of law and reality must include mind.

his mother, and said, almost with a chuckle, “Why Auntie has watermelon all over her face!” He could see clearly, that like the watermelon, the cancer was nothing more than a *hypnotic illusion* - it was not reality. The man and his mother discussed the watermelon story and his revelation about the “nothingness” of the cancer with his aunt. Together, they began to understand the hypnotic illusion of the physical senses - the illusion that is the feedback of the human mind and which has been graphically illustrated in Figure (9-1).

The next morning the niece who was taking care of the aunt called - so excited that she could hardly speak. She said, “The most wonderful thing has happened! That entire cancerous growth just fell off Auntie's face this morning, and she is WELL!”

Now it should be becoming apparent that we cannot always rely upon the senses for assessment of our well-being. In the experience given above, the man, as well as his mother and his aunt, eventually recognized that although they appeared to be standing knee-deep in the solidity of materiality and experiencing its effects, in actuality there existed a reality transcending the senses.

In regard to hypnotic states, William James, a philosopher and the first distinguished American psychologist, said, “Some subjects seem almost as obedient to suggestion in the waking state as in sleep, or even more so, according to certain observers.” He said further, “Suggestions come to us every moment of our lives, and to the extent that we accept them uncritically, unconsciously, passively, or without logical grounds, we are being mesmerized or hypnotized in our waking state. Suggestions may be audible or inaudible, personal or impersonal, random or purposeful, and have immediate or delayed effects.”⁽¹⁸⁾ Could it not be possible - especially if the prime aspect of reality is mental - that the suggestions about health and disease that come to us daily through the media of television, radio, the printed word, personal conversations with neighbors, might define in a general but broad way our future state of health? The paradigm that describes physical reality is reinforced by collective thought to the point, which if we are not careful, may dictate – as Hubbell relates - whether we will have failing eyesight in later years, weakened bones, or even gray hair!

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Blessing Others Also Blesses Oneself

A friend (Laurance Doyle, an Astrophysicist) whom I have talked with and communicated by e-mail, has related a healing experience he had as an adolescent participating in a judo tournament. During a match, his finger was bent back until the bone protruded (an open fracture). The instructor upon seeing the broken bone told him to go to hospital for X-rays. He prayed along the way and at the emergency room for a period of forty-five minutes. He remembered the Biblical account of God healing Job when he, Job, prayed for others. He began loving the patients in the emergency room, talking to and comforting them and completely forgetting about his finger. Eventually, looking down he saw the finger back in its proper position. But the most amazing thing

was that after the X-ray was shown to him, the technician said that the bone had been set and was already healed, and that there had been no need for him to come to the emergency room!

The clear evidence - and obvious evidence - that the bone had been broken made this healing special. Doyle said later, "We are at the verge of being forced by physics into accepting the fact that thought and body cannot be separated. What are the laws of thought? What are the laws of Mind [God]?"