

- 1 37th parallel 37THP: After mapping US ufo and animal mutilation events, Chuck Zukowski found they center on the 37th parallel. The book "37th Parallel was written describing Zukowski's discovery.
- 2 AAAS AAGEN: American Association for the Advancement of Science: Attempted a seminar on the UFO topic, but was discouraged by actions of Condon and Menzel
- 3 absorber theory Wheeler Feynman absorber theory. FIELD: quantum retarded and advanced waves: a wave can travel backward in time from the future to arrive at its source. May account for retrocausation.
- 4 Acupuncture Traditional Chinese medicine: needles manipulate the flow of vital energy. FIELD: Acupuncture points show greatly reduced electrical resistance compared to surrounding tissue. Painkilling endorphins and cortisol are released when points are stimulated at low frequency; mood regulating neurotransmitters like serotonin and norepinephrine at high frequency. Becker found electrical activity corresponding to the acupoint system. P. 55
- 5 acupuncture meridian system The bodily pathways through which vital energy is transmitted. FIELD: Popp thought molecular EM signaling might even explain acupuncture: The acupuncture meridian system may work as wave guides, transmitting particular energy frequencies to specific areas.p. 54 f.
- 6 adaptive optics GLOSSERY: Due to atmospheric turbulence, the image of any telescopic object can be smeared out to a size of at least one arc second, and the image of a star is constantly moving, changing on a time scale of less than a tenth of a second. "Adaptive optics" allows the distortions to be measured and corrected on this very short time scale by controlling the shape of a deformable mirror
- 7 AFOSI Air Force Office of Special Investigations. AAGEN:OUTTHERE: Targeted Dr Paul Bennewitz with a disinformation campaign.
- 8 Agnosticism belief that we cannot know if there is a God
- 9 AHTO PHENOM; REALDE: Advanced Human Technology Office: US Military project to optimize human potential.
- 10 AI connectionism parallel distributed processing: The fundamental faith of connectionists is that intelligence emerges from the interaction of large numbers of simple processing units organized in a network of appropriate structure. Although initially promising, significant problems have arisen. Although network models are said to be 'neurally inspired', the current level of neurophysiological realism is typically very low. Both the neurons and their connectivity patterns are routinely idealized and distorted, and the most successful learning rule, back propagation, has no recognizable counterpart in the nervous system
- 11 AIAA relating to UFOs UFOS2DAY: Ted Phillips participated in the American Institute of Aeronautics and Astronautics Aerospace Sciences meetings, along with Dr. Hynek, Jacque Vallee and Dr. David Saunders.
- 12 AIR American Institutes for Research
- 13 akashic records FIELD; PHENO: in Sanskrit, "ether": A term used to describe a compendium of knowledge (or memory) said to be encoded in a non-physical plane of existence. These records are alleged to contain all knowledge of human experience and the history of the cosmos. Although the term has been attributed to the doctrine of religious philosophy and metaphysics originating with Helena Petrovna Blavatsky, called Theosophy, the concept is ancient, Akasha being a Sanskrit word meaning "ether: all pervading space. In Indian philosophy, akasha was considered the first and most fundamental of the five elements, the others being earth, air, fire, and water; it is the

womb from which everything we perceive with our senses has emerged and into which everything will ultimately return. Ervin Laszlo argues that the Akashic Record is known to science today as the Zero Point Field.

14 alchemy FORBIDU: A word derived from 'Al Khem', the ancient Egyptian word for that country; 'alchemy' is also the root of the modern word 'chemistry'.

15 Alcubierre Warp Drive In 1994, a Mexican physicist, Miguel Alcubierre, proposed a solution of the Einstein field equations that would contract the space ahead of an object while expanding the space behind. This region, called a "warp bubble" or "Alcubierre Metric", which according to GTR, may appear in a previously flat region of spacetime and move away at speeds greater than the speed of light.. Also see FIELD..

16 Ancestor Syndrome GLOSSERY: The theoretical basis of Family constellation therapy. Not discussing and sharing painful or shameful events or losses at the time ensures a legacy within subsequent generations with repeated or similar events (including disease) re-emerging.

17 animal mutilation 37THP: Surgical operations to remove certain animal organs; Chupacabra (goat sucker). Mostly cattle; native American skinwalker mythology

18 anomalously investigation tools TSN: tools to investigate alleged numinous experiences: Appropriate comparison, Phenomenology, historical context, erotics, think in terms of energetics

19 anomalous healing distant healing, laying on of hands, prayer healing, faith healing

20 anomalous injury PHENOM: In 2005, after his government service with the CIA, Kit Green, an MD, began creating a structured database of individuals who were suffering enigmatic injuries and diseases, and who also had face to face encounters with UAPs. Many interesting cases resulted. Green began doing pro bono forensic investigation and diagnosis of patients injured by multiple witnessed anomalous events. Green orders brain scans, specialized blood, DNA and endocrine tests. In 2017, he had more than 100 active patients. His original hypothesis was that a majority of his patients had been exposed to technology from black programs. Non-lethal weapons programs, holograms, cloaking devices, drones. "25 % of my patients die from 5 to 7 years of my diagnosis, and I have no idea of how any programs I knew about 10 years ago can do these things.' P. 396 f.

21 anthropology study of human culture: See Michael Harner, Jean-Pierre Chaumeil, Mircea Eliade, Angelika Gebhart-Sayer on Twin Serpents of DNA.

22 anti-particles positron is the antiparticle of the electron, negative (anti) proton

23 Apollo moon missions Apollo moon mission: [nssdc dot gsfc dot nasa dot gov/planetary/lunar/Apollo dot html](http://nssdc.gsfc.nasa.gov/planetary/lunar/Apollo.html): The Apollo program was designed to land humans on the Moon and bring them safely back to Earth. Six of the missions (Apollos 11, 12, 14, 15, 16, and 17) achieved this goal. Apollos 7 and 9 were Earth orbiting missions to test the Command and Lunar Modules, and did not return lunar data. Apollos 8 and 10 tested various components while orbiting the Moon, and returned photography of the lunar surface. Apollo 13 did not land on the Moon due to a malfunction, but also returned photographs. The six missions that landed on the Moon returned a wealth of scientific data and almost 400 kilograms of lunar samples. Experiments included soil mechanics, meteoroids, seismic, heat flow, lunar ranging, magnetic fields, and solar wind experiments.

24 APRO Aerial Phenomenon Research Organization. WIKI: A UFO research group started in January 1952 by Jim and Coral Lorenzen, of Sturgeon Bay, Wisconsin. The group was based in Tucson, Arizona after 1960. APRO had many state branches, it remained active until late 1988. In 1969, a sizable portion of APRO's membership elected to form a

new group named the "Midwest UFO Network"; this soon expanded and became the Mutual UFO Network (MUFON), still active today.

25 Archetypes; Jungian Psychology [www dot verywellmind dot com/what-are-jungs-4-major-archetypes-2795439](http://www.dot.verywellmind.com/what-are-jungs-4-major-archetypes-2795439): Jung believed that the human psyche was composed of three components: the ego, the personal unconscious, and the collective unconscious. According to Jung, the ego represents the conscious mind while the personal unconscious contains memories including those that have been suppressed. The collective unconscious is a unique component in that Jung believed that this part of the psyche served as a form of psychological inheritance. It contained all of the knowledge and experiences we share as a species. In Jungian psychology, the archetypes represent universal patterns and images that are part of the collective unconscious. Jung believed that we inherit these archetypes much the way we inherit instinctive patterns of behavior.

26 Area 51 Groom Lake: Aviation: Testing area for military aircraft; Employs mercenary groups as Wackenhut Corp

27 ARPA, DARPA PHENOM: Advanced Research Projects Agency; Defense Advanced Research Projects Agency. The names of these two agencies seem to be used somewhat interchangeably. One of its products was the ARPANET, which evolved into the internet.

28 ASPR American Society for Psychical Research

29 Astral travel Travel on the Astral Plane. REALDE: Asks: is this related to Remote Viewing?

30 astrobiology the branch of biology concerned with the study of life in space. FORBIDU: Astrobiology finds many of the building blocks of life in space

31 atomic models GLOSSERY: Greek model: Leucippus of Miletus and his student Democritus, the atom is indivisible; JJ Thompson (plum pudding) model: many negative charges in a positive background; Rutherford model: many negative charges and small positive charge; Bohr model: solar system model QM model: electrons form a probability cloud around nucleus; ZPF model: The ZPF sustains the atomic processes..

32 aura The energy field detected around living things by aura readers. The energy field sensed by instrumentation is called the HEF

33 AWST Aviation Week and Space Technology : SAPRO p. 142: The March 9, 1992 issue of AWST disclosed that the B-2 electrostatically charges its exhaust stream and the leading edges of its wings. NOTE 1 SAPRO p. 473: W. B. Scott, "Black World Engineers, Scientists Encourage Using Highly Classified Technology for Civil Applications" AWST March 9, 1992 p.66-67. SAPRO p. 144: AWST Jan 22, 1968 p. 21: "Northrop Studying sonic boom remedy" :Northrop, the prime contractor for the B-2, had been experimenting for some time with the propulsive benefits of applying high voltage charge to aircraft hulls. In 1968, scientists from Northrop's Norair Division reported they had begun wind tunnel testing on the aerodynamic effects of applying high voltage charges to the leading edges of high speed aircraft. They expected the applied electrical potential would produce a coronal glow that would propagate upstream to ionize the air. The resulting electrical forces would lower drag, reduce heating, and soften sonic boom. NOTE 2 SAPRO p. 473: "Northrop Studying sonic boom remedy" . Although these disclosures were framed in the context of enhancing the B-2's stealth capability, they are part of its field propulsion system. With positive charged wing leading edge, and negative charged exhaust, the B-2 would function as an electrogravitic aircraft, just as in Brown's patented electrokinetic disk.

34 ayahuasca a mixture of DMT containing plants and beta-carboline plants that allow DMT to be absorbed by the digestive system

35 BAASS Bigelow Aerospace Advanced Space Studies, a sister company to Bigelow Aerospace. Arrangements were made with the FAA, as stated in the FAA manual, to be the contact point for pilots who wanted to report UFO sightings.

36 Backster effect REALDE: Backster experimented with plants and his polygraph, and found an apparent emotional response to threats and destruction of leaves of his dracaena plant. He was subjected to ridicule and scorn by most Western scientists, while Eastern European and Soviet scientists took his work seriously. A few US scientists followed up on his work. Hal Puthoff recognized the possibilities, and Cleve's work became part of the impetus for Puthoff's Remote Viewing research at SRI. P. 130 Backster's work then moved far beyond exploring the reactions of plants, which had become known through the book *The Secret Life of Plants*. His new work involved monitoring oral leukocytes or white blood cells. Backster found that there was often an immediate correlation between emotional events portrayed on TV (That the test subject experienced) and deviations on the chart recordings from the leukocytes in the saliva samples. This was especially true if the test subject had actually experienced similar events. P. 131 John B Alexander was able to hire Backster, and a night vision lab scientist was assigned to recreate Backster's lab setup. They used yogurt culture instead of saliva. Like the plants, yogurt seemed to be sensitive to the emotional state in the immediate environment. Alexander was hooked up to a lie detector as well as the Leucocyte reader. It was found he was able to fool the lie detector but not the leucocyte detector. PHENOM: "Skeptics and scientists tore the Backster Effect to shreds, starting with the fact that plants lack a nervous system. As of 2017, no other scientist has been able to repeat the experiment under strict lab controls...But even Charles Darwin, who studied plants his entire life, once observed that the root tip, or radicle, 'acts like the brain of one of the lower animals'"

37 ball lightning GLOSSERY: Atmospheric Phenomena: A luminous phenomenon occurring during thunderstorms. It is a mystery, however, that they should be visible not as a brief flash, i.e. just for microseconds, but exist for several seconds,

38 Battelle Memorial Institute Headquartered in Columbus OH, a private organization engaged in advanced research and development and in the commercialization of technological innovation. Battelle operates and manages 6 US national labs, including Oak Ridge, Lawrence Livermore, and Brookhaven. Battelle is close to Wright Pat, and its R&D specializes in advanced metallurgy and materials science

39 Battelle Second Progress Report UFOS2DAY: This report covered the Period September 1 to October 21, 1949 on Research and Development of Titanium Alloys Contract No 33(038)-3736" authors "Simmons, CW; Greenidge, CT; Craighead, CM and others" Center was responsible for one subsection: "Analytical Methods for the Titanium Base Alloy" which refers to a Nickel Titanium phase diagram that is required to make Nitinol.

40 Battelle UFO related contracts UFOS2DAY: Long before Roswell made the headlines, Battelle employees believed that special materials were studied there. There is no proof that these were from Roswell. WITOROS Anthony Braglia: The USAF's Project Bluebook commissioned a Battelle statistical study of UFO sightings around the nation. It was completed in 1954 and known as "Special Report No. 14", but Battelle's involvement was suppressed. This has been independently confirmed: <https://archive.org/details/ProjectBlueBookSpecialReport14>. WITOROS Anthony Braglia: In the months following the Roswell incident, Battelle was contracted by Wright Patterson to test and develop a "memory metal"; Nitinol was the result, a novel alloy of nickel and titanium, that displays shape recovery. Like the described Roswell debris, Nitinol is a memory metal that displays shape recovery. It remembers its original shape and can return to that shape when crumpled. It possesses high fatigue strength, is very light, is of similar color, and can withstand heat from a blowtorch. At the time of publication of this book, Nitinol was used in medical devices, antenna, and many other applications. Newer "intelligent metals" are being developed by NASA to create "adaptable" bendable wings and "self healing" outer skin material for spacecraft. The US Naval Ordnance Lab would officially introduce Nitinol in the 1962-3 frame time. UFOS2DAY: Other researchers also suggest that WPAFB contacted Battelle and asked them to study Roswell

debris and develop a similar material, which turned out to be Nitinol. After 1947, lab interest in titanium spiked. Battelle began its titanium studies immediately after Roswell. Several Battelle sources thought Battelle did conduct materials research on UFOs. Some even said this was common knowledge. Sources at Battelle said those selected to investigate alien artifacts were initially told they would be working with Soviet materials. Several informants said the research seemed to depress or even distress employees. One secured area at Battelle include linguists who were among the world's top translators and cryptologists.

41 behaviorism IRRMND: William James' person centered approach to psychology was soon largely abandoned in the US, in favor of a much narrower conception of scientific psychology. This approach tried to emulate the 'hard' sciences, especially physics. JB Watson published the founding manifesto of radical behaviorism in 1913. Psychology was no longer to be the science of mental life, but rather of behavior. It should 'never use the terms consciousness, mental states, mind, content, introspectively verifiable, imagery, and the like'. For the next half century mainstream American psychology followed Watson's lead.

42 Believers in reincarnation INFINMND: Pythagoras, thought to come from his studies in Egypt; Plato, recorded in his Phaedo. He believed innate ideas were inherited experiences from other lives. Socrates and Aristotle, students of Pythagoras and Plato, also professed the immortality of the soul. Tolstoy; Francis Bacon; Sir Walter Scott; Charles Dickens; Oscar Wilde, Rudyard Kipling, Ralph Waldo Emerson; Walt Whitman, Thomas Edison all accepted reincarnation. P. 211.

43 Bell Labs Scientists working for Bell Labs have made important and at times serendipitous discoveries. For example, Karl Jansky, working for Bell, discovered radio waves emanating from the Milky Way, in about 1930. This discovery would lead to the radio telescope and radio astronomy. Bell Labs also discovered the Cosmic Microwave Background Radiation.

44 Bell's Theorem AQCON: A mathematical proof of the EPR thought experiment, produced by JS Bell in 1964, and experimentally confirmed by Alain Aspect in 1972. This effect is probably not the result of a transfer of information, but rather a consequence of the one-ness of apparently separate objects.

45 Bermuda triangle GHAI p. 204 f. Controversial area

46 Big Bang Theory of beginning of the universe

47 Bigelow Aerospace Aviation: Bigelow Aerospace Advanced Space Studies (BAASS), Bigelow Aerospace mission Control Center in Nevada; NIDS

48 binding problem IRRMND The 'binding problem' arose as a consequence of the success of contemporary neuroscientists in analyzing sensory mechanisms, particularly the visual system. Different properties of a visual object, such as its form, color, and motion in depth are handled by largely separate regions or mechanisms within the visual system. But once the stimulus has been separated out in this way, how does it get back together as a unit of visual experience?

49 biochemical energy ATP, GTP; see photosynthesis

50 bio-communication communication among cells; Initially this was thought to occur as a result of biochemical reactions, however, other processes are likely involved, including solid state physics and electromagnetic and biophoton communication. See example FIELD;

51 Biophotons Ultra weak photon (light) emissions from the DNA of biological tissue. These emissions were originally discovered by Alexander G. Gurvich as "mitogenetic rays"; then rediscovered in the 1970 by European

scientists. They are thought to form a primary communication system in the biological organism. FIELD: Popp found that molecules in cells would respond to certain frequencies, and that a range of frequencies from biophotons would resonate with these molecules.

52 biorythms cycles of physiological processes within the human

53 black hole TPT: Yakov Zel'dovich conjectured that although "frozen stars" were invisible, they could be detected by their gravitational effects on nearby objects. Material from objects that are pulled into the black hole mixes and heats up in a process called accretion. He speculated that the energy produced by this process would explain quasars. Black hole entropy, Hawking radiation, evaporation, spinning Kerr type black hole could emit Penrose superradiance. NPM: Sidharth identifies matter particles – fermions- with quantum Kerr-Newman black holes (collapse of spinning massive star), not Schwarzschild black holes, which derive from collapse of a stationary star. This is the key to all of his theories. BHW: Schwarzschild radius: the radius of an imaginary sphere within which light will be pulled into the dark star (or black hole.) The black hole itself is a "singularity"; ie a point in space. The Schwarzschild radius is proportional to the mass. De Sitter black hole. TBF: planck length black hole; Hawking radiation: released from black holes.

54 black hole complementarity BHW: Depending on the state of motion of the observer, an atom might remain a tiny microscopic object, or it might spread out over the entire horizon of an enormous black hole.

55 Blackbody radiation GLOSSERY: A blackbody is an idealized object which absorbs and emits all frequencies of electromagnetic radiation in thermodynamic equilibrium. The classical Rayleigh Jeans model describes the intensity of blackbody radiation as a function of frequency for a fixed temperature. When compared with the experimental values, this model gives good results for long wavelengths, but intensity tends to infinity as wavelength became smaller, leading to the so-called "ultraviolet catastrophe". Wilhelm Wein proposed a distribution which gave good results at short wavelength, but poor results for longer wavelengths. This has been called the infra-red catastrophe. Using statistical mechanics, Max Planck derived an equation similar to the Rayleigh-Jeans equation, but with the adjustable parameter h , Planck's constant. Planck found that for h equal 6.63×10^{-34} J s, the experimental data could be reproduced, thus suggesting that blackbody radiation is quantized (digital) in energy level, though continuous (analog) in frequency

56 Body as unconscious mind MEMOT: The body is the unconscious mind. Repressed traumas caused by overwhelming emotion can be stored in the body. We have discovered other anatomical locations where high concentrations of almost every type of neuropeptide receptor exist, such as the dorsal horn, or back side of the spinal cord. P. 141

57 Body Mind debate on emotion MEMOT: William James believed emotions originated in the body and got perceived in the head; Cannon believed they originated in the head and trickled down to the body. James believed that we perceive events and have bodily feelings, and then the perceptions, which jiggle our memory and imagination. We label our physical sensations as one or another emotion. He believed there was no such entity as emotion. There is simply perception and bodily response. The pounding heart, tight stomach and tensed muscles ARE the emotion. P. 135. James' theory seemed to collapse under the weight of real data.; in this case from animal lab work done by his student Walter Cannon, who by 1927 had explained the sympathetic autonomic nervous system. The vagus nerve sends branches to many organs, including the pupils of the eyes, salivary glands, heart, lungs, stomach, intestines, bladder, sex organs, and adrenal glands. Stimulation of the vagus nerve via the hypothalamus leads to a physiological fight or flight response. This result suggested James' theory was wrong. P. 136. Cannon believed the hypothalamus was the seat of emotions. Pert suggested both Cannon's and James' theories were partially correct. This debate helped to shed light on a modern problem: how can emotions transform the body; either creating disease or healing it.

58 Boeing Institute of Biotechnology. AAGEN: References the book "Somebody Else is on the Moon" by George Leonard, however, as of 2017 there is no the "Boeing Institute of Biotechnology."

59 Bohm-Aharonov effect GLOSSERY: In 1959, Yakir Aharonov and David Bohm proposed that a moving electron can have its phase (the phase of the electron's wave function) altered by the vector potential of the electromagnetic field of a nearby object, without actually encountering the object or its magnetic field. The effect has been confirmed experimentally.

60 Bose statistics GLOSSERY: In the early 1920s Satyendra Nath Bose was studying the idea that the light came in little discrete packets which we now call "quanta" or "photons." Bose assumed certain rules for deciding when two photons should be counted up as either identical or different. Einstein guessed that these same rules might apply to atoms. He worked out the theory for how atoms would behave in a gas if these new rules applied. He found that the equations predicted there would not be much difference, except at very low temperatures. We now call these rules "Bose statistics" (or sometimes "Bose-Einstein statistics").

61 Bose-Einstein Condensate INTENT: Einstein found that the equations he derived from using the Bose-Einstein Statistics predicted at just above absolute zero, atoms would slow down to the same energy level. in this state the atoms would loose their individuality and look and behave like one giant atom. effect. The Bose-Einstein Condensate is "coherent", and has unusual properties, including superconductivity. NPM: Quantum phenomena are generally thought to take place only at the smallest microscopic levels, but Bose-Einstein condensates are macroscopic in size but appear to have quantum coherence. In the past, this macroscopic characteristic was only observed at extremely low temperatures in superconductors, but evidence has surfaced that such condensates operate in biological organisms

62 Brain as a reducing valve There are two main views of the relationship between brain and mind. The conventional view is that the brain creates the mind. A view that is gaining credibility is that the brain "filters" the mind. FOG: Aldous Huxley, in his book The Doors of Perception, proposed that the brain is a 'reducing valve' IRRMND: its authors strongly support the reducing valve concept.

63 Brain as a reducing valve MEMOT: There is no such thing as perceiving objective reality. For the brain not to be overloaded with sensory input, some sort of filtering must be used. Aldous Huxley referred to the brain as a reducing valve. How can we objectively define what is real? If what we perceive as real is filtered along a gradient of past emotions and learning, we cannot. Data shows that the nervous system is not capable of taking in everything, but can only scan the outer world for material it is prepared to find. P. 147. Native Americans, for example, literally could not "see" THE TALL European ships that invaded their land. Could this filtering mechanism also be the reason for the transformation of "UFOs" from chariots to ships to flying saucers?

64 Brentwood AFB Rendlesheim case REALDE: NIDS played role in the Rendlesham Forest case, also called the Brentwood AFB case. J. B. Alexander considers this one of the best cases, and says that even today (2017) more info is being revealed. He notes that, as what happened at Skin walker ranch, what happened at Rendlesham Forest has gone on for a long time and displays poly-phenomenal characteristics. P. 13

65 Buddhism TSN: Indian Tantric Buddhism traditions parallel alien abduction experience; DMTSM: Tibetan Buddhist Book of the Dead teaches that it takes 49 days for the soul of the recently dead to 'reincarnate'. SPOOK: Pure Land Buddhists, who date back to A.D. 400, believe that certain extreme forms of meditation can induce the NDEs. These guys were the original NDE researchers. One of the junior monk's duties was to sit at the deathbed of elders and write down their visions of the Pure Land. By the eleventh century, more than a hundred accounts of the Pure Land had been transcribed. P. 286.

- 66 caduceus WHEELSOL: A staff around which two serpents are entwined; a symbol of medical profession. This symbol is said to have first appeared on the staff of the legendary Egyptian high priest Tehuty, who is said to have brought to Egypt the divine knowledge of sacred healing. Images of caduceus from Mesopotamia and south America. p. 128 f. The symbol was seen to symbolize the power or resurrection over the physical death of the body. P. 125. The Caduceus also appears as the symbol of the Greek physician Asklepios. In Greek myth, Tehuty, Thoth, Hermes and Asklepios all share essentially the same personage. Asklepios came to be regarded as not only a healer of the body, but of the soul also.
- 67 California Institute for Human Science (CIHS) See Hiroshi Motoyama
- 68 cancer cancer victims produce fewer biophotons
- 69 Cash-Landrum (Pinewoods) encounter SAPRO: On the night of Dec 29, 1980, Betty Cash, Vickie Landrum, and Vickie's 7 year old grandson were driving about 20 miles north of Johnson Space Flight Center. They spotted a fiery object high in the sky that quickly descended to tree top level. They drove to within 130 ft of it and got out of their car to watch. Periodically a red orange cone of flames would roar out of it and it would rise slightly, then fall slightly and repeat the process. Landrum and her grandson got back into the car first, then cash. The car door handle became so hot Cash could not touch it with her hands, and had to use her coat to grab the handle. At that point, the vehicle was approached by almost 2 dozen twin rotor military helicopters, later IDed as CH-47 Chinooks, and some of the Bell Huey type. They appeared to be escorting the craft. All 3 were treated for radiation poisoning, and doctors listed their condition as life threatening. Cash and Landrum sued the US government, a case that drug on for years, but was finally dismissed. The severe effects the three sustained suggests they were exposed to an intense microwave beam. P. 263-265.
- 70 Casimer effect FIELD: two metal plates placed close together will develop an attractive force due to the ZPF.
- 71 Castle Air Museum GHAI: Parts from various damaged wartime B-29s at China Lake were collected and reassembled as a museum piece at Castle Air Museum. Those collecting pieces at China Lake saw apparitions, saw fuselage doors lock and unlock, and felt "presences". At the site of the reconstruction of a whole B-29, Castle Air Museum, apparitions appeared, tools and parts were moved, and doors opened and closed.
- 72 CCD camera Charge Coupled Devise camera: INTENT: Gary Schwartz took CCD photos of healers hands; found healing intention creates waves of (coherent) light. p.30.
- 73 Celestial theology GNOSTICS: Gurdjieff And Manichaeans: souls go to the moon on death
- 74 cellular consciousness REALDE:Cleve Backster found that there was often an immediate correlation between emotional events portrayed on TV (That the test subject experienced) and deviations on the chart recordings from the leukocytes in the saliva samples. In short, Backster found evidence supporting the idea that consciousness goes to the cellular level P. 131
- 75 Center for Relativity TPT:organization
- 76 cepheid variables <https://lco.global/spacebook/cepheid-variable-stars-supernovae-and-distance-measurement/>: While stellar parallax can only be used to measure distances to stars within hundreds of parsecs, Cepheid variable stars and supernovae can be used to measure larger distances such as the distances between galaxies. A Cepheid star's period (how often it pulsates) is directly related to its absolute luminosity or brightness. So by using a Cepheid star's apparent luminosity m and its absolute luminosity M in the distance modulus equation, the Cepheid star's distance in parsecs d can be found: $m - M = 5 \log d - 5$; or $d = 10^{(m - M + 5)/5}$ parsecs

77 CERN <https://home.cern/about>: The European Organization for Nuclear Research, Geneva Switzerland. The instruments used at CERN are particle accelerators and detectors.

78 Chaos theory GLOSSERY: Also known as the theory of non-linear dynamics or complexity theory. INFINMND: Chaotic systems are on a continuum between ordered and random. The science of detecting order in apparent randomness. Interdisciplinary in nature, it includes the fields of math, physics, biology, ecology, and meteorology. Fundamental is the notion that nonlinear equations are sensitive to initial conditions. Benoit Mandelbrot invented the notion of fractals and fractal dimension, and is famous for his "Mandelbrot Set".

79 Cheyenne Mountain Colorado: US Space Surveillance Center,

80 Circle Limit IV graphic by Escher; Circle Limit IV. BHW: Escher's drawing Circle Limit IV is "map" of negatively curved space that shows what a slice of Anti De Sitter space looks like. The angels and devils go on endlessly, becoming smaller and smaller as they fade into an infinite fractal edge

81 CISCOP (now CSI) Organization: Committee for Scientific Investigation of Claims of the Paranormal. Now Committee for Skeptical Inquiry. A debunking organization dedicated to denial of evidence that they disapprove of.

82 Clairaudience clear hearing is the ability to perceive sounds or words from beyond normal sense perception

83 clairvoyance ability to to perceive events in the future or beyond normal sensory contact.

84 Classical and symbolic cognitivism CTM IRRMND: Classical and symbolic cognitivism discussions had emphasized the similarities between brains and digital computers, for example, treating the all-or-nothing neural spike discharge, or action potential, as the equivalent of a digital relay. Kelly calls these discussions the First Cognitive Revolution of CTM. Kelly notes however, there is a ubiquitous presence in real nervous systems of analog processes, such as the spatial and temporal summation of neural input that leads to spike formation, and the rate and pattern of the resulting spike discharges. Computer science (CS), and Artificial Intelligence (AI) proponents had assumed they could disregard such low level 'hardware' details, and pitch their efforts at a level of abstraction that happened to be convenient both to them and to the available computers. P 13-14. Even former leaders of the First Cognitive Revolution, such as Jerome Bruner, Noam Chomsky, George Miller, and Ulric Neisser have publicly voiced disappointment with its results. Chomsky In particular has railed repeatedly against trying to prematurely 'reduce' the mind to currently understood neurophysiology.

85 coherence GLOSSERY: : In phase or in step; identical. Coherence can be a property of atoms, photons, biophotons, or any Boson. See Laser, Bose-Einstein Condensate, and Superradiance

86 Cold Dark Matter Model TPT: Adding dark matter in his "cold dark matter" model allowed him to predict what the distribution of galaxies looked like and how large the ripples in the relic radiation would be. Although this CDM model was readily accepted, there were problems. The CDM model could only be 7 billion years old, while the real universe had to be much older due to the presence of globular star clusters. P. 184. The proportion of dark matter to normal atoms had to be 25 to 1, but was found to be (?) 6 to 1. Still, no one could figure out where this dark matter was. Almost immediately Peebles gave up the CDM model. CDM adherents kept looking for a way to fix the CDM model. One way was to revive Einstein's cosmological constant. p. 185.

87 collective unconscious GLOSSERY: Carl Jung found that his patients were experiencing common images, symbols, and psychological forces that he suspected were connected to a deeper level of human experience. This deeper level he termed the collective unconscious.

- 88 colorizer HANDSOL: Barbara Brennan, with U N Parapsychology Club, was able to show part of the auric field on black and white TV by a colorizer, which amplifies greatly light intensity variations close to the body.
- 89 common mechanism NPM: Term used by Richard Mould to define biological entities involved both in consciousness and collapse of the wave function.
- 90 complementarity in physics, two contrasted theories, such as the wave and particle theories of light, that appear able to explain a phenomena
- 91 complexity Complexity theory, also called non-linear dynamics. INFINMND: complexity is not a point, but rather a spectrum, and chaos and strange attractors are a subset of complexity, between order and randomness; Irreducible complexity: LOG: Collins notes that the universe is irreducibly complex, but this is true of nature, and does not require a god; Kolmogorov complexity: Andrey Kolmogorov introduced a solution the problem of quantifying randomness in the 1950s. His solution is that the degree of randomness depends on how difficult the sequence is to produce. The quantity that tells us by how much programs for orderly things can be compressed to shorter programs
- 92 Compton Effect GLOSSERY: Quantum mechanical process whereby a photon collides with a single loosely bound electron, thereby which some of the energy and momentum is transferred to the electron. This effect provides evidence that light is made up of particles (photons), and that photons have momentum
- 93 Computational Theory of Mind IRRMND: Many of the original behaviorist formulations fell by the wayside in the mid 20th century, but in the 1950s, a more sophisticated form of behaviorism developed, uniting the philosophy of functionalism with the logical theory of Turing machines; that is, computers. This was the Computational Theory of Mind (CTM)
- 94 condensed charge physics FIELD: A nano-technology. Ordinarily, electrons repel each other. However, you can tightly cluster electronic charge if you calculate the characteristics of the ZPF, which at some point will begin to push electrons together like a tiny casimir force. This enables electronics applications in very tiny spaces. Ken Shoulders and Hal Puthoff invented a device that could fit an x-ray device at the end of a hypodermic needle, and a high frequency signal generator that would allow radar to be generated from a source the size of a credit card.
- 95 Conding Report TSN: British Ministry of Defense report on UAPs as a kind of plasma which may generate novel perceptions via temporal lobes
- 96 Condon Report AAGEN: Formed after a series of incidents that Dr David Saunders documented in the book "UFOs? Yes!" The Condon team split into two violently opposed factions. An early internal memo was discovered and published by the minority group as evidence that the Condon committee had never intended to look seriously into the ufo problem. p. 50 Condon fired the minority group. The files from the Condon committee were locked up at the university. They may have been destroyed. P 51. UFOS2DAY: A 1966 U of Colorado report The fact that the Air Force turned over its UFO problem to Condon at the University of Colorado was an insult to Hynek. Condon was biased against UFOs and ousted those who took a scientific approach. The UFO subject was dismissed in the report summary and conclusions, during the height of the cold war. The investigation behind the Condon report revealed that UFOs were significant phenomena worthy of study.
- 97 Consciousness research Lab for Advances in Consciousness and Health (LACH) at U of Arizona
- 98 Consciousness theories Jamesian views of consciousness; Penrose Hameroff Orch OR; FIELD: The revelations of Pribram, Hameroff, Yasue, etc. led Popp to think that perhaps, since biophotons occur throughout the body, that consciousness was a global phenomena, not just in the brain. Consciousness at it's most basic may be coherent light.

99 Constituent Quark Model CQM CONQUARK: Zweig treated quarks as physical constituents of hadrons, and thus derived all of the predictions of SU(3). In 1963 he concluded: "In view of the extremely crude manner in which we have approached the problem, the results we have obtained seem somewhat miraculous." In the old physics, there were two principle frameworks for theorizing about the strong interaction: quantum field theory and S-matrix theory. The CQM was unacceptable to protagonists of both of these frameworks. Although CQM failed experimentally, and was disreputable, it had great heuristic value. From the theorist's perspective, CQM was an explanatory resource for the interpretation of data. However, just as the theorist's practice was structured by the products of experiment, so the experimenter's practice was structured by the products of the theorist's research. Through the medium of CQM, theorists and experimenters maintained a mutually supportive symbiotic relationship. With the advent of quarks, the symbiosis between theory and experiment became more intimate. This is because experimenters began to move on from the low mass classic hadrons to higher mass hadrons which were more difficult to identify. Zweig observed, even in 1963, that "particle classification was difficult because many [resonance] peaks ...were spurious", and that of 26 meson resonances listed in an authoritative compilation, 19 subsequently disappeared. Kokkedee noted: "because of the unstable experimental situation many detailed statements of the model are not guaranteed against the passage of time."

100 cortisol A steroid hormone produced in the adrenal glands released during stress. It can help control blood sugar levels, regulate metabolism, help reduce inflammation, and assist with memory formulation. It controls salt and water balance and helps control blood pressure.

101 cosmic background radiation TPT: In 1964, the cosmic background radiation from the big bang was found by Arno Penzias and Robert Wilson of Bell Labs. P. 176. Study results showed that by looking at the ripples in the cosmic background radiation, it would be possible to see the first formation of galaxies. p. 178.

102 cosmic inflation theory, TPT: In 1980, Alan Guth came up with the essence of cosmic inflation. Rapid expansion, or inflation, would push the universe to almost instantly have no curvature, and to be very smooth. During inflation, quantum fluctuations would be stretched into the largest scales

103 cosmological constant TPT: Also called "Lambda", a fudge factor Einstein introduced into his GTR to allow for the observed expansion of the universe. The CC has created major controversies in the cosmology community. Einstein later repudiated it, and it fell into and out of favor depending on whether it supported other experimental findings. Alternatives to the CC were attributed to "dark Matter" and "dark energy". Many of the problems associated with simulations of the universe using the CDM model went away when the CC was included in it. P. 186. Hints of lambda were also appearing in the large scale structure of the universe. The Cosmic Background Explorer (COBE) provided the first measurement and map of the relic radiation. It was found that the hot and cold spots in the relic radiation had an angular size of about one degree and therefore the geometry of space had to be flat. The result was just as inflation had predicted, and further evidence from the large scale structure of the universe for CDM and a CC. p. 188-189. The final piece of data suggesting the CC came from exploding supernova. Several studies suggested there was not enough gravitational pull from dark mater or atoms to slow down the expansion of the universe; in fact it seemed to be accelerating. Something else was making the universe accelerate. Within a few months, a new standard model of cosmology, called the concordance model or "lambda CDM" model took root. Abbe Lemaitre assumed the CC was no other than the energy density of the vacuum. In 1967 Zeldovich added up the energy of all the virtual particles in the universe. He found that the resulting energy density would look like a CC but would have a gigantic value. Most cosmologists chose to ignore the CC. The problem remained: the huge amount of energy predicted from adding up all the virtual particles, calculated by Zeldovich, and their observed small value. P. 191.

104 Creationism LOG: The belief that the bible is to be interpreted literally

105 Crop Circles AAGEN: Many crop circles in southern England have been found near the mysterious structures of Stonehenge, Avebury, and Silbury hill. As with UFOs, crop circles are not new.... Only the reporting of them. Accounts date back to 1633 and 1678 in England. It appears that the circles have increased in number since the 1970s. Reports of such circles spread from England to include most countries, including the US. Very few circles are perfectly round. The crop is generally swirled outward from the center. The crop is pressed down in different layers, with some layers swirling in the opposite direction from adjacent layers.. the crop stalks are pressed to the ground, many bent 90 deg, yet are not broken or damaged. Often stalks are interwoven, like braids of hair. The crop remains alive, but will not grow vertically, only horizontally. Studies show changes in the molecular structure, consistent with the application of intense heat for a short duration. Another curious effect is "combing", where at the edges of the pattern where bent stalks fall on unbent stalks, the stalks are interleaved, the bent stalks are not smashed down on top of the unbent ones. Circle researchers have long noticed a military presence in the areas in which crop circles appear. Southern England has many military installations. Researcher Charles Thomas found that the CC formation process appeared to create a local magnetic anomaly which is detectable by a compass. The anomaly is not uniform, but complex. Dr. W. C. Levengood, a high profile bioscientist, has found evidence of consistent changes in cell structure, seeds, and growth within the circle plants. The only way he could duplicate the effect was by mcrowaving the seeds for a short period of time. The plant changes, including increased growth, were confirmed by independent researcher Kenneth Spelman of signalysis labs in England. Marshal Dudley, a designer of radiation detection equipment in Oak Ridge Tennessee, and Michael Chorost, found 11 radioisotopes in circle plants not present in control plants Vince Migliore notes the crop circle problem is inextricably related to ufos, psychic readings, ancient history, religious monuments, ley lines, mythology, and spirituality.

106 Cryptomnesia PHENOM: A term invented by Theodore Flournoy in 1898 as a result of studying Catherine-Elise Muller, aka Helene Smith, who in trance could describe in detail events from the lives of historical figures. She spoke multiple languages including some unidentified. Flournoy believed her responses came from her "subliminal imagination, derived largely from forgotten sources". P. 51-52. This concept propelled Jung to develop his own ideas about the collective conscious. P. 53

107 CSICOP Committee for the Scientific Investigation of Claims of the Paranormal; now Committee for Skeptical Inquiry; a debunking organization; HHSP: CSICOP funded the journal Skeptical Inquirer and issued their own press releases, at times blurring the line between a seemingly objective scientific group and a self-interested lobbying group.

108 Cymatic patterns Also known as Chladni Figures: These patterns were originally observed by the German physicist Ernst Florens Friedrich Chladni on fixed circular plates which were subjected to vibration. The plates can vibrate only at certain allowable frequencies and will demonstrate predictable "node" patterns, where there is no vibration, and so sand or powder will accumulate there.

109 dark energy who knows????

110 dark matter TPT: The American astronomer Vera Rubin found that outer stars in galaxies spin far too quickly to be described by gravity. She could not understand how the gravitational pull of the center of the galaxy could rein these stars in. Fritz Zwicky observed a similar phenomena, noting in 1937 that the density of luminous matter in the Coma cluster of galaxies must be tiny compared to some sort of 'dark matter'. Peeble's galaxy simulations also required large amounts of dark matter to stabilize. p. 183

111 Darwinian evolution FORBIDU: The cornerstone of this theory is natural selection, or survival of the fittest, proposed by Charles Darwin. If a new trait appears in a plant or animal that gives it an edge in survival, eventually, after many generations, only those with the new feature will remain. p. 260. But natural selection is not the driving force of evolution, genetic mutation is. Natural selection is more like a steering force; gifting a change or eliminating it. But what

causes the mutations? According to consensus, they arise from random copying errors that occur during replication. This accounts for the diversity of life on earth, we are told. p. 261. Hoyle and Wickramasinghe observed that ascribing all the variety of the animal, vegetable, and microbial world to random mutations was like saying a computer program can be improved by adding random errors. Direct experiment has shown that most mutations are harmful. Neo-darwinism fails to explain: The origin of DNA; The appearance of the nucleated, eukaryotic cell, making multi-celled life possible; The origin of sexual reproduction; How species originate and why there seem to be short intense bursts in species.

112 DC shift WHEELSOL: As red Kundalini energy moves up to the heart chakra, a DC shift occurs in the aura instrumentation; the aura turns from normal to brilliant white, and an altered state is reached. P. 184 f. Ordinary trauma is usually the experience that brings on a DC shift. Most of us have had the significant traumas of our lives recorded during a DC shift, which is why they are still in our subconscious and why they are still traumatic. P. 187.

113 DCBD phenomena Deliberately Caused Bodily Damage phenomena: Dervishes or other adepts may intentionally cause serious damage to their bodies, yet with complete control over bleeding and infection, and usually fast wound healing

114 De Broglie Wavelength GLOSSERY: In 1923 Louis de Broglie came up with an idea to explain Bohr's mathematical quantum formulations, as well as the resulting experimental support of the Bohr quantum model. He knew that the wavelength of a photon was equal to Planck's constant divided by its momentum. He suggested that perhaps matter has a wave/particle nature, with a wavelength equal to Planck's constant divided by the matter particle's momentum. Adaption of wavelength to electrons required that an integer number of waves reside in an electron's orbit, thus justifying the concept of restricting the energy of electrons to discrete values. Validity of the de Broglie hypothesis has been confirmed for macromolecules, as well as molecules, atoms, and subatomic particles

115 De Revolutionibus Copernicus completed this great work In 1530, which asserted that the earth rotated on its axis once daily and traveled around the sun once yearly. This work was at first accepted by the church. However, it was placed on the Index of Prohibited Books in 1616 as a result of Galileo's clash with the church. Because of its contribution to Calendrical Reform, it was not proscribed, but was to be expurgated. It was taken off the Index in 1758.

116 Department of Defense

117 Digital Biology Founded by Jacques Beneviste; asserts biocommunication can be achieved by digital media recordings

118 Dirac's equation FAUST: Shortly after the 1927 Solvey conference, Dirac, at age 25, formulated the equations that joined Bohr's QM to Einstein's relativity theory. This is the equation which predicted negative energy, or mass, and anticipated the positron. P. 165 f.

119 discovery of DNA Rosalind Franklin, Maurice Wilkins, Francis Crick , James Watson

120 Dissipative Structures AQCON: Similar to Szent-Gyorgyi's "Syntropy". Form or structure is maintained or becomes more complex due to a continuous input of energy. This theory can be applied to living systems, mechanical systems, psychology, learning, health, sociology, politics, and economics. GLOSSERY: Ilya Prigogine, a Nobel Laureate in thermodynamics, coined the phrase as a name for the patterns which self-organize; i.e. "stabilize" in far-from-equilibrium dissipative systems. Scientists call something dissipative if it loses energy to waste-heat. The Second Law of Thermodynamics amounts to saying that, if something is isolated from the rest of the world, it will dissipate all of its free energy. Equivalently, it maximizes its entropy. Prigogine and his advocates feel they have developed a mathematical Theory of Dissipative Structures which is very important to the physical and social sciences; accounting for such phenomena as the Great Red Spot on Jupiter, and perhaps even life itself. Other scientists, including Phil Anderson, also

a Nobel Laureate, doubt that stable dissipative structures are relevant to questions of the origin and persistence of life, or even exist. The fact that living systems can defy the second law of thermodynamics has been recognized for years.

121 Divine feminine

122 DMT Dimethyltryptamine, or DMT, a member of the tryptamine family, similar to serotonin; it is a powerful short lived psychedelic which is naturally present (endogenous) in the human body in small amounts. Enzymes called monoamine oxidases (MAO) break it down within seconds. It is as if DMT is needed for normal brain function, but is prevented from building to too high a level. Debate continues as to whether it is secreted from the pineal gland, however, the pineal also makes beta-carbolines, which inhibit the breakdown of DMT by MAOs. Certain plants that contain beta-carbolines are combined with other plants that contain DMT to produce the Amazonian brew ayahuasca. Dr. Robert Speltzer and Dr. Peter Fenwick have argued that DMT does not explain NDES because in the classic case of a NDE, all biological signals, all metabolic activity, especially of heart and brain, cease. However, DMT creates a chemical reaction in a functioning brain. The question remains: Why is this psychoactive substance produced naturally in the body?

123 DNA discovered by Rosalind Franklin, Maurice Wilkins, under the supervision of Francis Crick , James Watson.

124 DNA and light FIELD: Popp showed that one of the most essential sources of biophoton emission in the human body was DNA. COSSER: Jeremy Narby knew that DNA emits biophotons in the frequency range of visible light, and that although these emissions are very weak, they are coherent. Researchers compare the phenomenon to an "ultra-weak laser". A coherent source of light, like a laser, gives the sensation of bright colors, a luminescence, and an impression of holographic depth, which is consistent with ayahuasca-based hallucinatory experiences.

125 DNA and sound COSSER: Based on anthropologist Angelika Gebhart-Sayer's work, Jeremy Narby wonders whether DNA emits sound. (Note: the answer seems to be YES; phonons, which are "sound molecules", are associated with DNA.

126 dolphins telepathic communication

127 Doors of Perception PHENO: Book written by Aldous Huxley, describing his experiments with mescaline. Jim Morrison named his band The Doors after reading it. IRRED; UNBILI

128 double slit experiment GLOSSERY: Double slit experiment: The many peculiarities of quantum mechanics were captured in the double slit experiment, first performed by Thomas Young using a thin beam of light. A single particle of light (a *photon*) is emitted perpendicular to a screen on which are two slits situated symmetrically with respect to the approaching photon. Beyond the screen is a flat wall. What we observe in experiments is that the *photon* results in an interference pattern on the flat wall, consistent with the interpretation that the photon was emitted as a wave and traveled through both slits as a wave. Single *electrons* fired towards the double slit act as particles which may pass through one of the slits and be registered on the screen. However, as more *electrons*; hundreds, or thousands, are fired towards the double slit, the ones that make it through either of the two slits form an interference pattern, rather than piling up behind one or the other slit. Even more strange, physicists can shoot a thousand *electrons* at the double slitted wall, one at a time an hour apart. The result will be the same interference pattern as would have resulted from photons being fired at the double slits.

129 dowsing GLOSSERY: Sometimes called divining or doodlebugging in the US, or when searching specifically for water, water finding or water witching. A practice that attempts to locate hidden water wells, buried metals or ores, gemstones, or other objects as well as currents of earth radiation without the use of scientific apparatus. A Y- or L-shaped twig or rod is sometimes used during dowsing, although some dowsers use other equipment or no equipment at

all. Dowsing has been in use since ancient times and is still widely practiced although the scientific evidence for its efficacy is disputed. Some researchers have associated dowsing with Subtle Energy and magnetic Vector Potential. PHENOM: Finding buried materials by map dowsing is a specialty of Uri Geller. The military has used dowsing in Vietnam.

130 Drake equation OUTTHERE: A qualitative equation used to estimate the likelihood of contacting intelligent life in the universe.

131 early planetary cosmology Ptolmaic or earth centered system: All changes in the heavens had to occur in the lunar region close to the Earth, the realm of the fixed stars being permanent. Thus, the sun, moon, and planets all revolve around the earth; Brahic (Tycho Brahe) system: Planets revolve around sun; sun and moon revolve around earth; Copernican or heliocentric system: earth moon and planets all revolve around sun. all of these theories still needed the Ptolemaic theory of epicycles to explain retrograde motion of the planets.

132 earth magnetic field

133 Edgar Cayce Edgar Cayce Association for Research and Enlightenment

134 edge of chaos INFINMND: The Santa Fe group places specific emphasis on the phase they call "the edge of chaos" Hunt defines a "ridge of chaos"; beyond this ridge is not sudden randomness, but a gradual disintegration into randomness. P. 54. Stu Kauffman, of the SFI, believes complexity is not a point, but rather a spectrum, and that chaos is a subset of complexity, between order and randomness.

135 EEG Electro EncephaloGram

136 Eeman Biocircuit BCIRCUIT: copper, silk Because the energy conducted by the biocircuit has polarity and is conducted by silk as well as glass, it is similar to odyle energy described by Karl von Reichenbach. Reich's orgone energy was also conducted by silk. In 1991, a study supporting these effects, A Double Blind Study of the "Biocircuit," a Putative Subtle-Energy-Based Relaxation Device appeared in the ISSSEEM Journal Subtle Energies, and has been quoted in professional literature sources.

137 EGG FIELD: Roger Nelson et al decided to set up a network of REGs over the earth, to try to read Gaia. This became known as the Electro Gaia Gram, and the program became known as the Global Consciousness Project. P. 205f

138 EHBF Extraordinary Human Body Function: Chinese program based on Qigong

139 eight fold way CONQUARK: Isospin brought economy as well as order by grouping particles into multiplets. In the 1950s, many theorists attempted to build on this, looking for ways to achieve greater economy by grouping particles into larger families. In 1961, Gell Mann and Israeli theorist Yuval Ne'eman proposed the Eightfold Way, or 'SU(3)'. They were trying to set up a detailed quantum field theory of the strong interaction. However, the rapid development of the quark theory alternative to field theory approach to the strong interaction caused field theory to fall out of fashion, so SU(3) was divorced from its roots in gauge theory. By 1964, the predictive and explanatory successes of SU(3) were so great that it became a classification scheme for hadrons.

140 EKG electro cardiogram

141 electro magnetic spectrum Electromagnetic spectrum: Electromagnetic waves include a whole spectrum of different wavelengths, from high frequency short wavelength cosmic rays through visible light to microwaves to low frequency long wavelength radio waves. Shorter higher frequency EM waves are more like particles, called photons; longer low frequency waves are more like waves.

- 142 electro magnetic wave Consists of an electric field and a perpendicular magnetic field, both at right angles to the direction of travel of the wave. An electromagnetic wave in a vacuum travels at the speed of light.
- 143 Electrograms EEG, EKG, EMG
- 144 electrokinetic engines 37THP: Engine type possibly under development by the air force since the early 1980s.
- 145 Electron GLOSSERY: A primary subatomic entity having both wave and particle characteristics, depending on the act of observation.
- 146 electronic voice phenomena (EVP) SPOOK: The dead are said to communicate via playback of a tape recording, with no sounds being heard during the original recording. Proposed by David Ellis to be due to natural sounds. Ellis's conclusions were supported by the experiments of Imants Baruss. EVP supported by American Association of Electronic Voice Phenomena.
- 147 emergent properties GLOSSERY: A concept growing out of Complexity Theory, which holds that the total is greater than the sum of the parts; i.e. unexpected behaviors "emerge" from large numbers of component parts. Examples would be biological tissue that has properties that emerge from individual cells; water that has properties that emerge from individual water molecules. The concept of emergent properties opposes Reductionism, which says that the total is equal to the sum of the parts.
- 148 EMF ambient atmospheric includes ions and Schumann resonance; INFINMND: When the electrical aspects of the atmosphere are withdrawn, the auric fields became randomly disorganized. Sensory feedback was so impaired that subjects were totally unaware of their location of their bodies in space. Aura readers described energy as no longer flowing, but rather as jumping between people and chakras. Subjects often burst into tears and sobbed. When the electrical (EM) field of the room was increased beyond normal, the auric fields were restored and thinking became cleared. If the electrical aspect remained normal but magnetism was decreased, gross lack of coordination occurred. The neurological mechanism was thrown off; subjects could not balance; found it difficult to touch their fingers to their nose. Increasing magnetic component restored motor coordination.
- 149 EMF ELF Extremely low frequency EMF
- 150 EMG electro myo gram: INFINMND: EMG: Normally used to measure the electrical potential of muscles, the EMG was used by Dr Valerie Hunt, at UCLA, to measure energy variations at the skin surface adjacent to the traditional chakra locations. Signals from this study were recorded in the range of 100 to 1600 hz. Normal brain wave frequency is between 0 and 100 cycles per second (hz); muscle frequency reaches about 225 hz; and the heart up to 250 hz. Because of the much higher frequency, these signals, although observed by other researchers, had been assumed to be noise and for that reason disregarded. The original study was conducted to assess the energetic results of a physical manipulation technique called rolfing on the subjects
- 151 emotion MEMOT: Emotional theorists disagree on many things, including whether feelings are the same as emotions, how many basic emotions there are, or whether these are useful questions at all. They agree however, that there is now clear scientific experimental evidence that the facial expressions for anger, fear, sadness, enjoyment, and disgust are identical for all humans. This suggests inborn genetic mechanisms for their expression. Facial expressions that register surprise, contempt, shame and guilt are also probably pan-cultural. Certain emotions may also be combined to form a broad range of emotions; for example, fear plus surprise may result in alarm. Emotional experts also distinguish between emotion, mood, and temperament; with emotion being the most transient and identifiable in what caused it; mood lasting for hours or days, and temperament being genetically based. P. 132. Do Emotions originate in the Head or the Body? Until 1984, Pert, as many other neuroscientists, believed Penfield's work had shown

that emotions originate in the brain. However, she found that motional states or moods are produced by the various neuropeptide ligands, in receptors that occur throughout the body. What we experience as an emotion or feeling is experienced in all parts of the body simultaneously. This fits with Paul Ekman's observation that each emotion is experienced throughout the organism, and not just in the head or body. Pert believes repressed emotions are stored in the body – the unconscious mind- via the release of neuropeptide ligands, and the memories are held in receptors throughout the entire body. Being able to express emotions such as anger has been shown in studies to improve cancer survivability. Many psychologists have interpreted depression as suppressed anger. P. 192.

152 Endocrine system

153 endorphins NPM: the class of proteins called peptides, which includes endorphins, are considered in some theories of consciousness.

154 Endorphins MEMOT: The discovery of the opiate receptor by Candace Pert touched off the race to find the endogenous substance that used this receptor. P. 63. By 1975, endogenous morphine was found in pig brains by John Hughes, under the auspices of Hans Kosterlitz's lab in Scotland. Initially called enkephalins, the US name of endorphin (endogenous morphine) stuck. Hughes was able to provide chemical formulas for two: Tyr-Gly-Gly-Phe-Met and Tyr-Gly-Gly-Phe-Leu. (amino acid chains) Endorphins are now defined as natural pain and stress fighters, and at least 20 types of endorphins have been demonstrated in humans as of 2018

155 Energy Fields

156 Energy Medicine GLOSSERY: One of five domains of complementary and alternative medicine identified by the National Center for Complementary and Alternative Medicine in the US. Therapies predicated on theorized forms of "energy" unconfirmed by scientific investigation are known as "putative energy medicine". Therapies which rely on known forms of energy, such as electromagnetism are termed "veritable" energy therapies. Veritable energy therapies employ mechanical vibrations (such as sound) and electromagnetic forces, including visible light, magnetism, monochromatic radiation (such as laser beams), and rays from other parts of the electromagnetic spectrum. They involve the use of specific, measurable wavelengths and frequencies. Energy medicine involving putative energy is based on the supposition that illness results from disturbances in (undetected or unquantifiable) energies and energy fields and can be addressed via interventions into those energies and energy fields. Healing Touch, Reiki, and qi gong, for instance, purportedly influence subtle energies in ways that have not been detected by mechanical devices, and their reported therapeutic actions are not well-understood within conventional paradigms. According to Dr. Karl Maret, The specific term Energy Medicine appears to have its origin in an "Energy Medicine Conference" sponsored by the Fetzer Foundation in 1987.

157 Enigma Files AAGEN: remote viewing: : unofficial files accumulated by military remote viewers, mostly under the direction of Ed Dames

158 entity types TSN: deceased, reptilian; insectoid; kobold (little blue men)reptilian; DMT:reptilian, mantises, spiders, grays. beings examine, probe, interactive. Entities may help human healers. COSSER: Michael Harner had gone to the Peruvian Amazon to study the culture of the Conibo indians. Under the strict supervision of his indigenous friends, he drank ayahuasca. After several minutes he began hallucinating. He saw that his visions emanated from "giant reptilian creatures" resting at the lowest depths of his brain. Harner noted that "dragon" and "serpent" are synonymous in the indigenous tongue. Narby was astonished by the similarities between Harner's and Reichel-Dolmatoff's accounts of two different Amazonian cultures. In both cases there were reptiles in the brain and serpent-shaped boats of cosmic origin that were vessels of life at the beginning of time.

159 entropy quantum entropy; black hole entropy

160 enzyme systems PHILSPEAT: a large anomolous magnetic effect was found in enzyme systems. Frolich concluded that this magnetic effect could only arise from the equivalent of a superconducting ring present in biological systems, and that this implied long range correlations and order.

161 Epigenetics GLOSSERY: In genetics, the study of heritable changes in gene expression or cellular phenotype caused by mechanisms other than changes in the underlying DNA sequence. Conclusive evidence supporting epigenetics show that these mechanisms can enable the effects of parents' experiences to be passed down to subsequent generations.

162 Epilepsy FOG: usually considered as an electrical storm; but maybe it is more like a radio transmission. Maybe people with an overactive temporal lobe are able to tune into another dimension of reality

163 epiphenomena secondary phenomena. Some consider consciousness to be just a byproduct of biological processes.

164 EPR Paradox GLOSSERY: Also called EPR Thought Experiment This though experiment was devised by Einstein, Boris Podolosky, and Nathan Rosen in 1935, in an attempt to discredit the new quantum physics. This thought experiment proposed that if quantum theory were correct, measurement of the momentum of one particle [in a variation: a change in spin of one particle] in a two particle system would allow the momentum of the second particle to be known [in a variation: effect its twin simultaneously,] instantaneously, even if the two had been widely separated in space. The thought experiment was proven valid by J. S. Bell, and was the basis for Bell's Theorem.

165 ESP IRRMND: Psi phenomena includes telepathy, clairvoyance, claudience, precognition, psychokinesis PHENOM: remote viewing; HANDSOL: channeling,

166 ESP studies IRRMND: Staring studies of Braud & Schlitz . Studies by Rhine. PHENOM: Remote Viewing studies by US military

167 ether GLOSSERY: Science has traditionally required a medium for the propagation of waves. So, sound requires the medium of a gas or liquid or solid to be propagated; ocean waves require water, and earth for seismic waves. It was assumed the same would be true for the propagation of electromagnetic waves through astronomical space, which is a vacuum. The results of the Michaelson Morley experiment of 1887 was interpreted to mean there was zero ether, though a small value was actually recorded. Tests by Dayton Miller also produced small positive results. These small positive results have been claimed to be the result of systematic error. Discussion of the concept of aether has not ended. Physicists believe an aether field may explain dark matter or dark energy. See Michaelson Morley experiment, Dayton Clarence Miller, Glenn Starkman.

168 Evolution Glossery: Darwin came to understand that any population consists of individuals that are all slightly different from one another. Those individuals having a variation that gives them an advantage in staying alive long enough to successfully reproduce are the ones that pass on their traits more frequently to the next generation. Subsequently, their traits become more common and the population evolves. Darwin called this "descent with modification." This process has come to be known as natural selection. Current (2013) thinking, as exemplified in books such as Carter Phipp's book "Evolutionaries", finds evolution to be a driving force at many levels in social and physical, as well as biological processes.

169 exocytosis simultaneous emission of neurotransmitter molecules by the synaptic vesicles

170 Family constellation therapy BIOG2; GLOSSERY: A group psychology process developet by Bert Hellinger, which may include "representatives" outside of the family, that has the power to shift generations of familial suffering and unhappiness. Many people unconsciously "take on" destructive familial patterns of anxiety, depression, anger, guilt,

aloneness, alcoholism and even illness as a way of "belonging" in our families. Family Constellation therapy allow us to break these patterns. Emphasis is placed on perceptive intuition in placing the representatives and in subsequent steps of the procedure. The theoretical foundation is called the "ancestor syndrome". The aim is to tune into what the psychiatrist Albrecht Mahr describes as the Knowing Field and biologist Rupert Sheldrake has theorized is Morphic Resonance.

171 Faraday effect UNSEEN: Faraday rotation; Faraday effect on pulsar radio waves

172 fascia aka connective tissue: INFINMND: connective tissue has piezoelectric capacities, where stretching enhances the electrical capacity. P 12. Inside the body, aura readers saw energy flowing in an extensive mesh network p. 30 Like a fishnet that did not correspond with meridian pathways. Hunt et al believed it was flowing through the connective tissue.

173 Fatima apparitions

174 feedback MEMOT: In the broadest terms, feedback just means modifying an output by feeding back information from observation of the output to alter the output; such as in steering a car.] This principle also is how the physiological processes of the body work to keep the organism in "homeostasis". P. 258. Generally in mechanical systems, feedback needs to be negative to prevent instability.

175 Fermilab particle accelerator lab, Chicago

176 Fermions GLOSSERY: Subatomic particles which obeys Fermi–Dirac statistics. Two or more fermions cannot occupy the same quantum state. Fermions are associated with matter. Electrons and protons are fermions

177 Feynman diagrams Feynman diagrams FEYNBOW: Graphic analogues of the mathematical expressions needed to describe the behaviour of systems of interacting electrons and positrons. [www dot quora dot com/How-do-you-understand-read-Feynmans-diagram](http://www.dot.quora.dot.com/How-do-you-understand-read-Feynmans-diagram): straight arrows represent electrons or positrons, while wiggly lines represent photons.

178 FFG HHSP: Fundamental Fysiks Group: Amid the social and political upheavals of the 1970s, Berkeley physics grad students Elizabeth Rauscher and George Weissmann, having connections with the Theoretical Physics Division of Lawrence Berkeley Laboratory, founded an informal physics discussion group, the Fundamental Fysiks Group. The weekly brainstorming attracted PhD physicists from elite universities who had been set adrift in professional uncertainty. While the physics profession floundered, members of the FFG emerged as the public avant-gard of the new physics, with patrons such as the CIA. They were able to carve out a few institutional niches, the best known being the Esalen Institute in Big Sur, CA. With flair, members of the FFG secured financial backing from unusual patrons. With the CIA and Pentagon officials, self-made millionaires stepped in to keep the group going. Members included: Elizabeth Rauscher, George Weissmann, Jack Sarfatti, Fritjov Capra, Saul-Paul Sirag, Nick Herbert, John Clauser, Henry Stapp, Fred Allen Wolf, Heinz Pagels, Philippe Eberhard. HHSP.

179 Fine Structure Constant NPM: In 1936, Max Born wrote a paper "The Mysterious Number 137". The number represents the fine structure constant (FSC), relating the speed of light, the charge of an electron, and Planck's constant (which gives us the smallest size of a quanta). The FSC is used to predict the spacing of spectral lines, and it's value is close to 1/137, an irrational number. Numerous special applications of the number 137 are noted in arithmetic, algebra, and geometry.P. 163-4.

180 Fine tuning of the laws of physics FORBIDU: British physicists Bernard Carr and Martin Rees, in the 'Nature' article "The Anthropic Principle and the Structure of the Physical World" concluded that the laws of physics seem to have been 'fine tuned' to allow the development of intelligent life.... The assumption behind Carr and Rees'

paper was that what looks like design is really an illusion based on our human-centered perception of the cosmos. Fine tuned: triple-alpha nuclear process; relative masses of protons, electrons and neutrons; relationships (constants) between six of the fundamental forces; ratio of positive to negative charges in the quantum vacuum.

181 fire walking REALDE:

182 Fluorescent Lighting GLOSSARY: With alternating current, if the voltage and frequency are high enough, no filament is needed. This is the principle of the fluorescent light bulb. In a fluorescent light, low-pressure mercury vapor is ionized, which then emits ultraviolet light. The inside of a fluorescent light is coated with a phosphor, which accepts the energy of ultraviolet energy and emits visible photons. The light we see from a fluorescent tube is the light given off by the phosphor that coats the inside of the tube. Fluorescent lighting is generally harmful to health unless properly shielded. Neon lighting uses a similar principle, but a noble gas, such as neon or argon is used, rather than mercury, and the gas itself is ionized to produce a color. Neon produces a red light; argon a lavender light.

183 Foo fighters UFOs: fiery objects following allied aircraft. Captured German and Japanese pilots claimed they had also been followed by these fiery objects.

184 Foreign Technology Division of WP AFB Division at Wright Patterson responsible for the analysis and possible retroengineering of foreign air vehicles. Traditionally in UFOlogy, this is where UFOs or UAVs are also said to be analyzed.

185 Foundational scientific research Foundational Questions Institute (FXQI); arXiv.org; advocates addressing all the questions of science, not just computational.

186 four forces electromagnetism, gravity, weak force, strong force, electromagnetic and weak combined into electro-weak

187 Fourier Series Any periodic function (with period 2π) can be represented by an infinite sum of sines and cosines. The sum may be truncated at any time to form an approximation of the given periodic function. The sum is referred to as the Fourier series representation of the given periodic function.

188 Fourier Transform Any non-periodic function can be represented mathematically in either the frequency or time domain. The frequency representation is called the Fourier transform; the time representation is called the inverse Fourier transform. Alternatively, a spatial representation in time may also be represented in the frequency domain. "Fourier transform" and "inverse Fourier transform" may also refer to plots of the mathematical expressions. The actual algorithm used to make the calculations may take several forms, including the Fast Fourier Transform (FFT), and the Discrete Fourier Transform (DFT)

189 Fractals vs holograms Fractals are analogous to holograms, but I'm not sure they are the same. INFINMND: "The chaos concept further elaborates a hologram to show that although each part is alike, there will be slight differences in the whole over time." "The hologram is a more spatial pattern, whereas chaos is a process containing both time and space".

190 frequency in physics, the number of oscillations or cycles per unit time, usually cycles/second which is hertz

191 Frequency Spectrum analysis

192 Frequency range of biosignals EEG EKG EMG INFINMND: Traditional values: Brain waves are recorded by EEG and range from 0 to 20 hz; heart, measured by EKG generates stronger waves with frequencies up to 225 hz; muscle, measured by EMG frequencies between 0 and 250 hz; each muscle group with a built in frequency. The HEF, or aura, seems to be steady (DC) (or maybe just so hi in freq that it looks like SS) Biosignals using telemetry: On every recording of muscle areas, there is a residual resting baseline of activity. This has generally been regarded as a rough indicator of muscle tension, and thus not important. Yet Hunt observes that after rolfing, this baseline was stronger, while a manual tension test showed that subjects were more relaxed. When this baseline data was filtered to remove brain, heart, and muscle frequencies (0 to 250 hz), There is a void between 250 to 450 or 500 hz, but from 500 to 20000 hz, the frequency data was continuous, the telemetry instrument was not able to record beyond 20000 hz. All electrical activity, including that of the HEF (auric field), was present in all telemeter recordings. Energy field patterns seem to be related to streams of consciousness. When a person's field reached higher vibrational states, he no longer experienced material things such as bodies and ego states, or the physical world. He experienced knowing, higher information, transcendental ideas, insight about reality, and creativity.. the consistently highest vibrations were recorded from people who were accepted "seers" p. 93

193 Full spectrum lighting HEALTHAL: Light that contains the full spectrum of visible frequencies, from ultraviolet to infrared, found in the electromagnetic spectrum. Because of the early efforts of John Ott, the study of the biological effects of lighting has become a science. Full spectrum and natural lighting has now been shown to be associated with increased productivity and improved health.

194 FWH Myers tertium quid view of consciousness IRRMND: Traditionally there have been two views of mind; In the 'old' philosophical view, mind is viewed as an indivisible whole. In the 'new' view of physiological psychology, mind is seen as an aggregate of elements; it's perceived unity derives entirely from the evolved coordination of the parts and processes of the body organism. These views seem incompatible, but Myers, in keeping with the "tertium quid" approach, argued neither view is wrong, but both views are incomplete. Myers used the electromagnetic spectrum as analogous to the expanded 'self'. Our ordinary waking consciousness is to our expanded consciousness as the portion of the visible EM spectrum is to the whole EM spectrum. The older more primitive processes are in the 'infrared' region of the consciousness spectrum, At the 'red' end, consciousness disappears among organic processes. In the ultraviolet region are those mental capacities that remain latent because they have not yet emerged at a supraliminal level through the evolutionary process. Such latent 'ultraviolet' capacities include telepathy, creative genius, mystical perceptions, etc. In Myers's model, evolution of consciousness involves the shifting of the supraluminal segment up the spectrum into the ultraviolet, as more and more psychological processes are mastered and then relegated to the infrared, while, simultaneously, latent psychological capacities or processes are drawn out of the ultraviolet into the supraliminal.

195 Gaia hypothesis FORBIDU: ^James Lovelock's proposal that life keeps the planet in a condition suitable for life. From this, he developed the idea of the earth as a self-regulating entity. He says: The earth's living matter, air, oceans, and land surface form a complex system which can be seen as a single organism and which has the capacity to keep our planet a fit place for life." Dawkins condemned Lovelock's system, but as a 2010 BBC documentary showed, much of the thinking behind the Gaia hypothesis has become mainstream. p. 252.

196 Ganzfeld method Reducing external stimuli for purposes of studying consciousness.

197 gauge theory One particular class of quantum field theories. Yang-Mills gauge theory,

198 GDV Gas Discharge Visualization" (GDV) technique

199 Geller Effect

- 200 Genesis space module A collapsible space module which is "inflated" in orbit. Started by NASA as TransHab, taken over by Bigelow as Genesis
- 201 Genetic link in psychic powers PHENOM: , Physician Kit Green found that those Remote Viewers who were always right, like Pat Price, were also abnormal. They were much smarter than the average human being. From blood tests, genetic tests, IQ tests, neurological and cardiovascular tests, they were abnormal. In contrast, General Stubblebine disagreed. He was convinced that ESP, PK, and other forms of psychic functioning were latent in all people and could be brought out in training.
- 202 geographic power centers Stonehenge, Delphi, etc. Are these areas of high strength schumann resonance?
- 203 geometric space Euclidean Space: conforms to Euclidean geometry or geometry on a flat plane. Angles of triangles add up to 180; parallel lines never intersect; non parallel lines will intersect exactly once. Non-euclidean space: Elliptical space describes the geometry on a sphere: Angles in triangles add up to more than 180deg. A right triangle on a sphere has 3 90 degree angles. Hyperbolic space describes the geometry on a hyperbolic paraboloid, or saddle. Angles in triangles add up to less than 180deg. Minkowski, de Sitter, and Anti de Sitter space are Euclidean, Elliptical, and Hyperbolic space that obeys the tenants of special relativity. finestructure.com/2009/05/understanding-anti-de-sitter-space
- 204 globular star clusters [www dot space dot com/29717-globular-clusters dot html](http://www.space.com/29717-globular-clusters.html): Densely packed collections of ancient stars. Roughly spherical in shape, they contain hundreds of thousands, and sometimes millions, of stars. Studying them helps astronomers estimate the age of the universe or figure out where the center of a galaxy lies. There are about 150 known globular clusters in the Milky Way galaxy, according to Georgia State University's HyperPhysics website. Most are estimated to be at least 10 billion years old, and contain some of the oldest stars in the galaxy.
- 205 Gnosticism GNOSTICS: The central tenants of Gnosticism; that we humans are somehow asleep to our lives and the true meaning of reality; yet we can awaken; that there is a higher form of personal religion in comparison with which organized religion is a travesty; and that reality is not what it seems to be, have spread into diverse forms in popular culture. Gnosticism Stresses knowing god directly by experience rather than accept as a matter of faith; knowledge of oneself becomes knowledge of god, because the deepest part of each individual is akin to god. Its tenants included a belief in Belief in reincarnation. Many of the "heretical" forms of early Christianity had Gnostic like elements: Manichaeans, Cathars, Paulicans and Bogomils. A historical chain links all of these, and the current Mandaean of Iraq, to the ancient Gnostics. Other Spiritual systems have similar qualities to them: Advaita Vedanta, Mahayana Buddhism, Kabbalah, Neoplatonism and certain forms of Islamic mysticism. William Blake came up with his own system, very much like Gnostic.
- 206 Godel's Incompleteness Theorem NPM: Argues that any formal system of logic must depend on accepted principles, called axioms, which cannot be proved in that system. ie, no formal logic system can ever be truly complete. Roger Penrose argued that therefore no formal computational system will ever be able to replicate the complexity of the mind and human intelligence.
- 207 Gravitation inventions and discoveries SAPRO: Starting with the established phenomena of moving charged capacitors, T. T. Brown developed the electrogravitic motor, for which he received British Patents in November 1928. He developed sidereal electrometers to show that the thrust of his gravitators varied with time in a way that related to solar and lunar tides, and the center of the Milky Way galaxy. He also discovered that complex silicates, and natural igneous rocks and clays spontaneously generate AC and DC electrical potentials voltage varied in much the same way as his sidereal electrometers. He named these materials petrovoltatics. TPT: Soon after coming up with GTR, Einstein had

shown that spacetime should contain waves; ripples in space and time. Just like water or EM waves, gravitational waves can carry energy from one place to another. These waves have been very hard to find. In 1978, Joe Taylor announced that the orbit of two neutron stars was shrinking in the manner Einstein had predicted. Because of this it was proposed they were losing energy through gravitational radiation. This helped to confirm that gravitational waves were real. In March 2014, a group of physicists led by John Kovac of Harvard announced that their team, BICEP2, had detected gravitational waves left over from the big bang. As time went on, holes in their analysis grew. The jury is still out on BICEP2.

208 gravity DECODE: Information, as represented by entropy, is now seen to underpin both quantum mechanics and gravity. TPT: quantum mechanics and gravity (Einstein's general theory) are considered incompatible

209 Great Time

210 Green Bank Observatory In the 1950s, the Federal Communications Commission created the National Radio Quiet Zone, a 13,000-square-mile swath of sparsely populated countryside that straddles the borders of West Virginia, Virginia, and Maryland. Use of the airwaves inside the zone is strictly regulated to ensure that the high-tech telescopes at Green Bank Virginia can operate with minimal disturbance. Green Bank Observatory has been used to research Pulsars, to discover the black hole at the center of the Milky Way galaxy, and to discover the first organic molecule found in space, formaldehyde. The observatory has a number of radio telescopes which can be controlled by radio astronomers 24/7, from many parts of the US and the world. It is in effect a small town, having its own water supply, sewage disposal system, housing for visiting scientists, facilities for hardware and software development, cafeteria, and visitor center. The radio scopes are all of dish configuration. They include Grote Reber's historic first radio scope, the 85ft Howard Tatel scope; a 40 and 45 ft scope, a 140 ft hydraulic powered equatorial mounted scope, a 300 ft scope, a 20 meter (65.6 ft) educational scope, and the huge 360x330 ft clam shaped Green Bank scope. From: Radio Astronomy: Observing the Invisible Universe Felix J. Lockman, PhD The Teaching Company Lecture 7. For 60 years, the National Radio Astronomy Observatory was Green Bank's parent organization, until recommending it be defunded by the National Science Foundation by October 1, 2016. Green Bank has survived the cutoff by asserting its independence. On October 1 2016, its scientists broke away and formed their own rogue organization: the solo Green Bank Observatory. <https://www.wired.com/2016/10/happens-space-observatory-goes-rogue/>

211 GTRelativity GLOSSERY: Einstein published this General theory in 1916. It considers observers in any state of uniform motion including relative acceleration. Einstein had to learn Riemannian geometry to develop his 10 equations. His theory that nothing could exceed the speed of light flew in the face of Newton's law of gravity, which said that gravity could be felt instantly. Einstein resolved the dilemma by proposing that gravity is the curvature of space. Light has been shown to bend, following the curvature of space, around massive stars. The amount of apparent displacement agrees with Einstein's predictions. This provides experimental support of General Relativity. General Relativity combined with the development of radio astronomy allowed great advances in astronomy and cosmology. They allowed development and confirmation of the big bang, expanding universe, quasars, black holes, and pulsars. Einstein calculated that ripples of gravity travel at exactly the speed of light. General Theory of Relativity: math; differential geometry. TPT: Riemannian geometry, Einstein Field Equations, cosmological constant, Golden Age

212 Gunn diode SAPRO: named after physicist J.B. Gunn, who discovered that a crystal of gallium arsenide would spontaneously oscillate at microwave frequencies when a sufficiently high DC voltage was applied. P. 216. This is basically a solid state microwave generator. Although Gunn diodes of greater than 30 watts are unavailable to the public, those shipped out to defense corporations like Northrop Grumman, Boeing, Lockheed Martin, Raytheon and SAIC are possibly of much higher power. P 217-218.

213 GUTs GUTs; theories which provide a coherent mathematical description of the four forces. Grand Unified Theories: TPT: "canonical" and "covariant" approaches to joining GTR and quantum theory

214 HAARP ADPTH: For years, no military program has sparked more fevered speculation than the mysterious High Frequency Active Auroral Research Program, or HAARP, located about 8 miles north of Gakona, Alaska. HAARP has been the focus for Dr. Nick Bagich. For years, the Pentagon has pooh-poohed speculation that the enormous collection of transmitters, radar, and magnetometers in Alaska was some sort of super weapon. But, it turns out, this speculation may have some validity. A Freedom of Information Act turned up a report titled HAARP: Research and Applications, from the Air Force Research Laboratory and Office of Naval Research, and it lays out the uses the military uses for HAARP. This document reveals that HAARP can actually perform a number of militarily important functions, all involving the interactions of radio waves with the high atmosphere, magnetosphere and ionosphere.

215 Hallucinations HJSTDEL: Perceptions of an individual not (normally) perceivable by others. Hallucinations may occur in subjects administered DMT, those having Near Death Experiences (NDEs), those claiming alien abduction, those with schizophrenia, and the general population. Many otherwise "normal" people have reported hallucinations, especially auditory, which are positive, and are not considered pathologic. The possibility that these perceptions represent some deeper reality has not been disproved.

216 hallucinogen produce hallucinogenic effects: Includes DMT, LSD, Muscarine, atropine, and bufotenin. PHENO: Teonanactl: Also called God's Flesh, is a hallucinogenic, but is also said to have divine qualities. It allowed human consciousness to separate for a time from the body.

217 healing

218 healing research Bernard Grad; Carroll Nash; Gerald Solfvin; Randolph Byrd; Elisabeth Targ and Fred Sicher; Elmer Green

219 heart attack gun

220 Heart Consciousness GLOSSERY: It has been generally believed that conscious awareness originates in the brain alone. Recent scientific research however, suggests that consciousness actually emerges from the brain and body acting together. A growing body of evidence suggests that the heart plays a particularly significant role in this process.

221 HEF and cosmos WHEELSOL: The 6th chakra, also called the Celestial chakra, holds our future; in antiquity it was believed that when we die, we become a star; realm of insight, foresight, inspiration, and psychic phenomena.

222 HEF chakra INFINMND: Wheel like vortices of energy over nerve plexes and endocrine centers of the body and pineal gland, connected to the meridians and acupuncture points. Numerous researchers have shown elevated electrical readings from these locations. Hunt used bipolar surface sensors on the skin over the chakras. If the chakras all had a similar amplitude and frequency they were coherent or synchronous. If grossly different they were out of synch or anti-coherent. The measure of anti-coherence between the chakras was associated with physical and emotional dysfunction or disease. P. 34. As the student went through the healing procedure, aura readings were synchronized with the instrument readings, which showed energy moving up the legs into the heart and then up to the top of the head. P. 16. The general pattern of ELF chakras (generally chakras 1, 2, and 3) is similar for all people; while the EHF of chakras reveals a personal emotional patterning. A grounded state in material reality shows frequencies of 350-600 hz. Altered states can reach as high as 200,000 hz.. p. 111. WHEELSOL: Sanskrit for wheel of light. 7 chakras inside body; with the addition of the 2 chakras outside the body, the Atman and Brahmin, there are 9. Each of the 7 has a physical, an emotional, a creative, and a celestial component. In addition, each has its own viewpoint or purpose. P. 40. In her

experience, each chakra has 4 qualities; color, size and shape, rotation or spin, and intensity. The field of all the chakras combine to produce the aura. P. 28 There are 122 smaller or secondary chakras, and occur where there is a joint. P. 41. Each major chakra corresponds to a color, a body, a gland, and an animal (along the evolutionary scale): 1 red physical gonads snake; 2 orange emotional lymphatic aquatic animals; 3 yellow mental adrenal birds; 4 green astral thymus 4 legged mammals; 5 blue etheric thyroid human; 6 purple celestial pineal spirits; 7 white ketheric (Kether in hebrew = crown) pituitary kichina. P 42-43. Cultural systems advocating chakra system:include Native American; Hindu (Upanishads); Greek mystery schools; Hermetic including early Christian sects. The British Theosophists, Alice Bailey, and Charles Leadbeater, Annie Besant reintroduced the Chakra system again around 1900. P. 57. The menstrual cycle can cause some of a woman's chakras to spin backwards for 9 days a month.

223 HEF color WHEELSOL: The color complements of the chakras are more like pigment than light. In pigment red yellow and blue are primary; yellow and blue make green; blue and red make violet; red and yellow make orange; all together make black. In light, red green and violet are primary; red and green make yellow; violet and green make cyan; violet and red lake magenta, and all mixed give white. P. 80. INFINMND: aura readers calls of aura intensity and color: red, orange, yellow, green, blue, purple, and white. A Fourier transform of waveforms from the time into the frequency domain showed a frequency/color sequence different from visible light, and at a much lower frequency than light. Further, auric white is associated with higher EMG frequency than other auric colors, while the frequency of white light is an average of the visible light colors. WHEELSOL: The color complements of the chakras are more like pigment than light. In pigment red yellow and blue are primary; yellow and blue make green; blue and red make violet; red and yellow make orange; all together make black. In light, red green and violet are primary; red and green make yellow; violet and green make cyan; violet and red lake magenta, and all mixed give white. P. 80.

224 HEF evidence INFINMND:comes from wave shape analysis, Fourier frequency analysis, and frequency spectrogram. These recordings co-related precisely with colors observed by experienced aura readers. Testing was done on subjects response to rolfing over a 20 year period by 8 experienced aura readers. They agreed on primary and secondary colors, but some readings varied in color among the readers. Hunt et al observed that before EEG, EKG, or EMG was activated, the auric field had already responded. Changes in the aura preceded changes in blood pressure, GSR, heart rate and muscle contraction. This led them to postulate that a person's primary response in his world takes place first in the auric field. P. 25.

225 HEF frequency WHEELSOL: The auric spectrum corresponds to the visible light spectrum, but it's instrumented frequency is 1011 times lower. P. 77.

226 HEF Kundalini WHEELSOL: the sleeping snake, is located in the first chakra, which is sometimes called the Kundalini chakra. It is where our power, our sexuality, our "fire" is located. When it awakens it travels up the chakras to the third eye. The uncoiled (awakened) Kundalini appears as coiled twin serpents around the chakras, as in the Caduceus. P. 148. The Kundalini energy is related to hormones secreted by the endocrine glands of the reproductive organs, these hormones resonate in several harmonics of red. P. 147. The uncoiled (awakened) Kundalini appears as coiled twin serpents around the chakras, as in the Caduceus. P. 148. The uncoiled serpent is also linked to "siddhi powers", including all manifestations of ESP or psychic power.

227 HEF magnetic properties WHEELSOL: The substance associated with the 7th chakra is magnetum.

228 HEF sensing unit INFINMND: A wireless radio telemetry unit was used: sensors on various parts of the body detect electrical activity on the skin surface which is transmitted by wire to a radio transmitter on a belt around the subject. From there the electrical signal was transmitted on FM radio frequency carrier to a radio receiver in the lab. P. 18. Typical hardwired equipment used for EEG, EKG, and EMG, did not pick up the entire millivoltage signal.

- 229 HEF template for human body WHEELSOL: The 5th, or etheric chakra holds the template for the physical body;
- 230 Heisenberg uncertainty principle quantum mechanical principle which states that the velocity and momentum of a subatomic particle can never both be known with certainty. FIELD: implies that no subatomic particle remains at rest, but is constantly in motion due to a ground state energy field, the ZPF
- 231 heliocentric theory FORBIDU: Propose by Nikolas Copernicus that earth circles the sun rather than the earth being the center of the universe. The heliocentric theory eventually replaced Ptolemaic theory of planetary motion, which needed epicycles to account for retrograde motion of the planets. Heliocentric theory is considered the beginning of the parting of science and religion p. 9.
- 232 Hemi-sync uses the binaural beat concept to effect changes in consciousness
- 233 hermetica WHEELSOL: a collection of texts that were attributed to the legendary Hermes Trismegistus, a high priest in ancient Egypt. FORBIDU: -a collection of texts that were attributed to the legendary Hermes Trismegistus, a high priest in ancient Egypt. However, in 1914, Isaac Casaubon showed in his "Of Things Holy and Ecclesiastical" (De rebus sacris et ecclesiasticis) that the texts were not written until the second or third century CE. The Hermetica had an enormous influence on scientists like Kepler and Galileo.
- 234 Higgs mechanism mainstream physics theory that accounts for mass in the universe by postulating a "Higgs boson"; claimed to have been discovered.
- 235 Hinduism
- 236 Holographic Metaphor FIELD: Although the metaphor of a hologram was important to Pribram, this was not his focus; rather, the ability of quantum waves to store vast quantities of information in 3 dimensions, and for our brains to be able to read this information, and from this to create the world. The important part is wave interference. P. 84
- 237 Holographic Paradigm GLOSSERY: A theory developed by a collaboration between David Bohm and Karl Pribram, that both the mind and the universe are holographic constructions created from the frequency domain.
- 238 Holographic Principle GLOSSERY: The notion, developed by Leonard Susskind and Gerard 't Hooft from String Theory and a consideration of black holes, that the universe may be a holographic projection: Everything inside a region of space can be described by bits of information restricted to the boundary. A revised definition of the holographic principle becomes "Everything inside an ADS space can be described by bits of information stored on the surface of the ADS space"
- 239 Holographic Universe AQCON: David Bohm's conception; The explicate order is the solid world we know, which arises from the Implicate order; the hidden ground of being, which is like the blurred frequency interference information on the photographic plate.
- 240 Holography GLOSSERY: Optical Holography is a photographic technique which creates a three-dimensional image. It developed out of an attempt to improve the electron microscope. An ordinary electron microgram includes only amplitude information. Dennis Gabor suspected the phase dropped out because there was nothing to compare it with. Mathematical analysis showed that one has only to superpose on the amplitude only image, which is entirely unlike the true image, a "coherent background", today called a "reference wave". So if one illuminates the amplitude only picture with the coherent background, the true image will come out, because the original wavefront is reconstructed. Gabor was able to verify the theory in 1948, by light-optical experiments with coherent light.

241 holonomic brain theory GLOSSERY: Holonomic Brain Model of Cognitive Function: Describes a type of cognitive functioning based on Fourier transformations, which convert space-time coordinate systems (x,y,z) into spectral coordinate systems. Karl Pribram, who fashioned the holonomic brain model of cognitive function in 1987 in collaboration with David Bohm, conjectured that the reason subatomic particles are entangled is because at a deeper level of reality these particles are not individual but actually extensions or emanations of the same wave-forms. Pribram's Theory: when you first notice something in the visual field, certain frequencies resonate in the neurons of the brain. These neurons send information about these frequencies to another set of neurons which make a Fourier transform and sends the resulting information to a third set of neurons, which will then construct pattern that will eventually make up the virtual image we perceive. Storing memory in wave interference patterns is very efficient, accounting for our vast capability to remember. Recall would be instantaneous, in the form of a 3-d image.

242 homeopathy GLOSSERY: A method of using micro-doses of natural substances in water or other media to treat illness. The substance is diluted in the media to the point that no molecules of the substance remain in it. Therapeutic effect is due to the effect of the "frequency" of the substance on the media, as for example a change in the bond angles of the water molecule. The method is attributed to Samuel Hahnemann. FIELD: Popp thought of homeopathy as photon sucking, or resonance absorber. Homeopathy rests on the notion that likes treat likes. A plant extract at full strength that can cause illness in a human, at weak strength can cure the illness. The high dilution substance would still carry the same vibrations, but like a tuning fork, it might attract and absorb the sickening vibrations. (In fact, this also describes the effect of vaccinations.) p. 54

243 Hudson Valley sightings TSN: The Hudson Valley has been a UFO hot spot for the entire 20th century. The first major UFO flap in the US was the airship mystery of 1896-97, during which hundreds of sightings of craft flying over major US cities were reported. Another major wave occurred 1909-1910, this time centered in the Hudson Valley region, and again mysterious airships. p. 86. Linda Zimmerman has written two books tracing the UFO phenomena in the Hudson Valley from 1909 to the present. She finds a dizzying array of earlier phenomena similar to those of later in the century; "airships" then and space ships later; telepathy and precognition; abductions, timelessness. p. 87. The 1980s saw the strongest spike in sightings and up close encounters. J. Allen Hynek, Philip J. Imbrogno, and journalist Bob Pratt devoted a whole book to the topic, claiming in later editions some 7046 reported cases in the Hudson Valley from 1982-1995. p. 88. Whitley Strieber's experiences also fit with the geographic context of the "Hudson Valley UFO Sightings. P 84-86.

244 Human Energy Field: HEF

245 Hutchinson effect GLOSSERY: Defined by John Hutchison as "a continuation of T. Townsend Brown's central thesis about the BB Effect, when given "extra" voltage, elements suspend their "programming" and no longer conform to regular laws of physics such as gravity. Some theorists think the effect is the result of opposing electromagnetic fields cancelling each other out, creating a powerful flow of space energy." Phenomena reported to have occurred include: levitation of heavy objects, fusion of dissimilar materials, anomalous heating of metals without burning adjacent material, spontaneous fracturing of metals, changes in the crystalline structure and physical properties of metals, and disappearance of metal samples.

246 hypnosis

247 IANDS International Association of ND Studies

248 ICRL International Consciousness Research Labs; U of Arizona

249 IIEDs (intention imprinted electronic devices) from William Tiller "Real Magic"

250 immune system PHENOM: Garry Nolan runs Nolan Lab at Stanford, and is one of the world's leading research scientists specializing in genetics, immunology, and bioinformatics. "All kinds of trauma can be picked up by the immune system" Nolan said. "Every event that happens to you is recorded in your immune system... every surgery or bee sting ...flu, head cold, allergy is recorded by the immune system." Doctors will likely soon be able from blood testing to read the historical record of that person's physiological life. We are also mapping immune systems of people and their families who claim to be remote viewers or have anomalous perception. There seems to be a genetic component. p. 399.

251 immune system MEMOT: A key property of the immune system is that its cells move, as for example white blood cells called monocytes or macrophages in a later state of growth. Monocytes and other white blood cells such as lymphocytes travel in the blood and at some point come within "scenting" distance of a given neuropeptide, and begin to crawl to it because of the cells receptors. Ruff and Pert discovered that every neuropeptide they could find in the brain was also on the surface of the human monocyte. Immune cells also make store and secrete neuropeptides themselves. Although this is an example of how the nervous, immune, and endocrine system are integrated, this idea was not accepted in mainstream science in the early 1980s. One argument is the existence of the blood-brain barrier. It is true that many drugs are absorbed slowly or not at all by the brain, but evidence shows that many immunopeptides reach the brain.p. 183. Also note: DMT also can breach the BB barrier.

252 Imperial College London

253 implicate order Bohm postulated a hidden order that held all information, and an explicate order, in which that information is made explicite.

254 information GLOSSERY: Originally considered to be the content of human communication, information has now become more like a telecommunication industry commodity. Although difficult to define, it is associated with increase in randomness or entropy. Maximum information (disorder) occurs in the quantum vacuum, so it may be thought of as the fundamental unit of existence. INFINMND: Hunt proposes that health is the active flow of information. Jahn and Dunne, in "Margins of Reality: The Role of Consciousness in the Physical World" presume that the sole substance of any reality is information. Functionally, information is any stimuli that consciousness is capable of sensing and reacting to. Some physicists are trying to recast quantum physics in terms of information theory.

255 inhabitants of the distant future

256 Institute for Advanced Studies at Austin In 2016 headed by Hal Puthoff. PHENOM: research in exotic propulsion systems. Its EarthTech International manages 32 subcontracts, mostly military and intelligence related. "we pursue novel ideas in gravity, cosmology, and new sources of energy. Its client list includes the DOD, NASA, DARPA, and Lockheed's Skunk Works. P. 388

257 institutes Institute for Advanced Studies at Austin; Institute for Learning and Brain Sciences at U W in Seattle; TPT: Institute of Field Physics; Monroe Institute: founded by Robert Monroe, who advocates for out of body experiences using the hemi-sync process

258 Intelligent Design GLOSSERY: The argument that the scientifically recognized Fine Tuning of Universal Physical Constants to allow evolution of life is proof of the existence of God. As Steven Goldberg notes, although Intelligent Design as a scientific hypothesis is operationally vacuous, the appearance of design is a legitimate scientific phenomena, and therefore a legitimate scientific observation. LOG: Collins notes that while ID is presented as a scientific theory, it was not born from a scientific tradition, and it fails to qualify as a scientific theory, which would predict other findings and suggest further experiments.

259 intentionality TSN: Anomalous events may "intend" provocation and confusion

260 International Institute of Biophysics Scientists from around the world became interested in Fritz Popp's research in bio-photons. They formed the IIB.

261 invisible college FORBIDU: In 1614, the Rosicrucian manifestos; the Fama and Confessio, caused great excitement and controversy in Germany. The manifestos announced the existence of a secret, elite brotherhood, which was privy to advanced knowledge. Although it is not known if such a secret society existed, clearly the publications were part of a campaign organized by a group of like-minded individuals. The Rosicrucian craze then shifted to France. In 1623 notices appeared in Paris announcing that members of the 'College of the Brothers of the Rose Cross' were present in the city, on 'a visible and invisible stay', prompting the rather evocative nickname of the Invisibles...References to an 'Invisible College' appeared in letters written in 1646 and 1647 by Robert Boyle, credited with turning alchemy into chemistry, One of the founders of the ^Royal Society^. INVCOL: According to Jacques Vallee, as of 1975, a Group of about 100 members in five or six countries. publicly silent dedicated researchers. Hynek named a UFO group this, after the original "invisible college" became the Royal Society

262 ion effect TIONE: NOTE: Negative ions create positive vibes. 2002 WebMD Feature supports Soyka's main findings. Negative ions, associated with relaxation, allow us to absorb oxygen more readily, appear to promote the quality of alpha brain waves, and have been used as treatment for anxiety and fear neurosis. Positive ions are associated with increased levels of serotonin and reduced blood oxygen levels, and tend to speed up the metabolic process. INFINMND: During the Santa Ana winds, which rush down the mountains with strong positive ions, the HEF becomes small. After days of these winds, people become irritable and sometimes ill. The aura expanded when the person was in the mountains or near the sea.

263 ion pumping cords BCIRCUIT:Yoshio Menaka began connecting acupuncture needles in acupoints via copper wires into which he inserted low resistance germanium diodes. This technique proved to be very successful. This led to the development of 'ion pumping cords'. Today these are used to connect both needles and supercutaneous electrodes.

264 JASON committee PHENOM: An elite committee within the Department of Defense

265 Josephson Junction used in magnetometers: 2 layers of superconducting material sandwiching a thin layer of non-superconducting material.

266 Kabbalah HANDSOL:, the Jewish mystical thought of 538 BC, refers to astral light energy.

267 Kaluza Klein theories NPM: Theories which use extra dimensions, in addition to the three spatial, to create a topology that unifies the forces.

268 Keplers Laws BIOG2: Published in 1609 and 1619. The Law of Orbits: All planets move in elliptical orbits, with the sun at one focus. ... The Law of Areas: A line that connects a planet to the sun sweeps out equal areas in equal times. 3. The Law of Periods: The squares of the periods of the planets are proportional to the cubes of their mean distance to the sun.

269 Kundalini WHEELSOL: the sleeping snake, is located in the first chakra, which is sometimes called the Kundalini chakra. It is where our power, our sexuality, our "fire" is located. When it awakens it travels up the chakras to the third eye. The Kundalini energy is related to hormones secreted by the endocrine glands of the reproductive organs, these hormones resonate in several harmonics of red. P. 147. In the Hindu myth, the twin serpents Ida and Pengali (female and male) intertwine the body. P 130. These (awakened) Kundalini serpents appear as coiled twin serpents

around a staff, and resemble the Caduceus. The uncoiled serpents are also linked to “siddhi powers”, including all manifestations of ESP or psychic power.

270 LACH Lab for Advances in Consciousness and Health (U of AZ)

271 Lagrangian a mathematical function. Yang Mills Lagrangian for QED contains no mass term

272 Lamb shift a difference in energy between two energy levels $2S_{1/2}$ and $2P_{1/2}$ of the hydrogen atom which was not predicted by the Dirac equation. This led to the development of radar

273 Laplace transform GLOSSARY: a transformation of a linear differential equation in the time domain, into an algebraic equation in the S domain, where S has a real and imaginary (frequency) component. The roots of the algebraic equation, where the equation value goes to infinity, are called poles. The zeros of the algebraic equation, where the equation value goes to zero, are called zeros. The plot in the S plane of poles and zeros can be used to construct bode plots, and is still used extensively in modeling the stability of physical systems, from simple electro mechanical devices, to aircraft.

274 large scale structure TPT: Jim Peebles and his grad student Jer Yu found a new powerful way to study the GTR: look at how galaxies are distributed in space to form large scale structure, and use that to discover how spacetime began and evolved. This provided Peebles with a theoretical model of the universe. p. 179 Marc Davis and John Huchra at Harvard soon found immense structures in the real universe; galaxies were arranged in walls filaments and clusters that came to be known as the cosmic web, leaving large voids. P. 173-174. This large scale structure was predicted in Peebles’ Cold Dark Matter (CDM) model of the universe, and is important because it suggests there is more matter in the universe, in the form of dark matter, than we at first thought. The large scale structure Peebles predicted was beginning to emerge in the real world. But there were problems. The structure of the real universe is much smoother than Peebles’ model. Also, why does the geometry of space look so simple? It seems to have no overall curvature, so Euclid’s rules apply. The universe we live in seems incredibly unlikely. At the big bang, the tendency for the universe to expand had to be tuned so that it did not collapse, nor expand into an empty void. The solution was Alan Guth’s theory of cosmic inflation.

275 laser GLOSSARY: Light amplification by stimulated emission of radiation”. Einstein discovered that when a photon hits an atom that is already excited from being hit by a previous photon, the atom releases a new photon that is completely identical to the incoming photon; same color, going in the same direction. This process leads to a buildup of coherent photons. Since a common stimulus triggers the emission events which provide the amplified light, the emitted photons are in temporal and spatial phase (ie in step) with one another. Coherent laser light is important in producing the interference pattern which is used to produce holograms.

276 Lawrence Livermore Lab PHENOM: From its beginning, Lawrence Livermore lab focused largely on the development of nuclear weapons. Visions seen by Nuclear Scientists during Uri Geller’s visit in 1974 caused some to quit.

277 Ligands MEMOT: Receptors await the appropriate chemical key, or ligand, to bind with them. Ligands are much smaller than receptors, and divided into three chemical types: neurotransmitters, steroids, and peptides.

Neurotransmitters (NTs): made in the brain to carry information across the gap, or synapse, between neurons. A few NTs are unmodified amino acids. NTs include acetylcholine, norepinephrine, dopamine, histamine, glycine, GABA, and serotonin. Steroids: include the sex hormones testosterone, progesterone, and estrogen. All start out as cholesterol. Peptides; constitutes perhaps 95% of all ligands. These play a wide role in regulating practically all life processes. Like receptors, ligands are proteins, made of chains of amino acids. The bond that holds amino acids together is of carbon and nitrogen, and is very tough. About a hundred amino acids in a chain make a polypeptide; after two hundred, its

called a protein. To characterize a new peptide, the sequence of amino acids in it must be determined. There are 20 known amino acids. P. 64. WDM Paton proposed how two nearly identical drugs could bind to the same receptor. The 'agonist' could enter the receptor and make changes in the cell, while the other, the 'antagonist', could block the receptor by occupying it but causing no cell change.

278 Light as nutrient HEALTHAL; DOMH: Sharks and insects, as observed by the Smithsonian Institution, obtain as much as 90% of their energy from the earth's magnetic field.

279 Lockheed Glenn Martin FIELD: A NASA congress in Albuquerque, explored the possibility of a craft creating its own wormhole. Companies, including Lockheed Martin, gave their support. P. 218. SAPRO: Glenn Martin Aircraft company was the first in the US to investigate electrogravitational propulsion. NOTE: 42 p. 470: L. A. Gerardin, "Electro-Gravitic Propulsion" in Interavia (Switzerland) 11(12) 1956 p. 992.

280 Lonnie Zamora incident AAGEN: April 24 1964, Socorro N. M. Zamora's report included a description of apparent insignia: a stick arrow pointing up over a horizontal line enclosed in a semicircle. Much later, Jacques Vallee said this was the Arabic astrological sign for Venus. Witness M. S. Chavez, N M State police. J Alen Hynek was unable to deconstruct the story.

281 Los Almos National Lab controlled chain reaction of nuclear fission developed

282 Los Angeles Air Raid AAGEN: on On Feb 25, 1942, 1430 rounds of antiaircraft ammunition were fired at incoming craft detected by radar, yet no planes were shot down and no bombs were dropped. There were no military casualties.

283 LSD AKA ketamine psychedelic drug: tryptamine family: related to serotonin. Karl Janson is a noted expert on this substance.

284 Lunar anomalies transient lunar phenomena (TLP), anomolous lunar structures and composition,

285 Macroscopic Quantum States

286 magnetic energy INFINMND: In lab tests, Hunt found that an increase in magnetic energy preceded a change in consciousness, emotion, or any dramatic change in electrical energy. Becker found that at the location of an injury, magnetic energy increased. Magnetic energy is present in the Schumann resonance.

287 magnetism magnetic, Weiss regions

288 magnetometer instrument meaduring magnetic fields; SQUID (superconducting quantum interference device) is very powerful

289 magnetotherapy

290 Maharishi Effect FIELD: Proposition that practicing Transcendental Meditation helps us to get in touch with a fundamental field that connects all things. The more people meditating, the less violence and discord. The results of such studies have been positive, and have appeared in journals such as the Journal of Conflict Resolution, the Journal of Mind and Behavior, and Social Indicators Research. P 211

291 Majestic 12 documents AAGEN: According to these unauthenticated documents, a small select group of prominent military officers and scientists answerable only to Truman was created to deal with UFOs. [this statement seems to contradict the statement from AAGEN p 148] OUTTHERE: p. 251. Although no government agency admits to knowing about these documents, the FBI was never able to either proove or disprove the existence of these

documents. WITOROS Concurs that because these alleged documents “have no apparent provenance”, they cannot be used as evidence. P. 32 f. UFOS2DAY: many consider this part of disinfo campaign.

292 Mars Effect Controversy over Gauquelin’s “Mars Effect”, which alleged a statistical correlation between athletic eminence and the position of the planet Mars relative to the horizon at time and place of birth raged for years. His work was attacked not only by the French skeptical committee CFEPP (Comité Français pour l'Etude des Phénomènes Paranormaux), but also CSICOP. CSICOP’s biased handling of this issue resulted in open criticism such as that from CSICOP Fellow Richard Kammann and CSICOP researcher and astronomer Dennis Rawlins, as well as several resignations. see http://www.checktheevidence.com/Disclosure/Web%20Pages/Mars%20Effect%20Controversy%20-%20A%20Brief%20Chronology%20-%20Planetos_info.htm

293 martial arts Akida: REALDE: defensive martial art, which uses the agressor's movements to defeat him. Qigong: HANDSOL: At Shanghai Atomic Nuclear Institute of Academia Sinica, it was shown that emanations from Qigong masters seems to have a low frequency sound wave that “appears as a low frequency carrier wave” (?) Qi was also detected as a microparticle flow.

294 materialism The belief that the the only things that are real have a material basis. In this sense, it is a religion.

295 Maxwell’s equations Classical Electromagnetic theory: Maxwell’s mathematical model drew the disparate pieces of knowledge regarding electricity into one unified set of equations. His original set of eight equations was recast by Olive Heaviside and Heinrich Hertz into six equations, which has fueled assertions that the six equations now accepted as gospel in electrical engineering have omitted some of physical reality. CONQUARK: There is a certain arbitrariness in these equations, which are formulated in terms of electric and magnetic fields, which can be expressed as derivatives of vector and scalar potentials. The arbitrariness arises because one can modify the potentials in space and time, without changing the associated fields. Thus, classical EM is said to exhibit gauge invariance. This invariance carries over into the quantized version of electromagnetism, QED.

296 memory The ability to imprint and store information.

297 memory of water FIELD: The ability of water to imprint and store information about other molecules.

298 mescaline psychedelic drug: phenethylamine family from peyote cactus

299 Metamaterials SAPRO: With proper engineering, it is possible to produce Metamaterials, whose permittivity and permeability are both negative over a specific frequency range, causing them to exhibit a negative index of refraction. Since negatively refracting materials are full of resonances, these resonances can be exploited to enhance the scattering cross section, and hence the propulsive force of the material. In 2001, Smith et al UC San Diego successfully demonstrated the production of a metamaterial. NOTE 6-8. P. 199. Claudio Parazzoli, Kin Li at Boeing Phantom Works constructed another one. P. 200.

300 metaphor

301 metaphysical physicists Bohm, Einstein, Heisenberg, Penfield, Eccles, Eddington, Schroedinger. FFG physicists.

302 Michaelson Morley experiment conventional Interferometer experiment which was used to show there was no classical ether

303 Microphages MEMOT: Mobile scavenger cells that cleaned up debris left over from battles to kill invading microorganisms. They also helped repair body tissue and orchestrated a chemical cascade to heal the organism. Michael Ruff wondered how they did all this without some way to communicate with each other and the rest of the body. p. 160. Ruff and Pert showed that macrophage antibodies, which normally destroy external debris in the lungs, can bond to cancer cells because these cancer cells themselves were mutated macrophages, originally sent to clean up and repair of damaged tissue. The implication of this was that there was a clear connection between cancer, the immune system, and toxicity in the body. This could be an underlying mechanism that explains how cancer is a response to toxicity.

304 Microtubules GLOSSERY: Conveyer belts inside the cells. They move vesicles, granules, organelles like mitochondria, and chromosomes via special attachment proteins. They also serve a cytoskeletal role. Structurally, they are linear polymers of tubulin which is a globular protein. The noted scientist Sir Roger Penrose proposes that the microtubules within brain cells may be the seat of consciousness. FIELD: microscopic hexagonal lattices of fine filaments of protein, called tubulins form hollow cylinders. 13 strands of tubules wrap around the core in a spiral, and all the microtubules in a cell radiate outward from the center of the cell to the membrane. The coherence of the microtubules could account for the near instantaneous operation of the brain, as well as the well known phenomena of EEG patterns in separate brains to become synchronized.

305 Microwave propulsion Hearsay: SAPRO: North American Aviation, later named N A Rockwell worked on a program for the DOD to develop an antigravity vehicle that used microwave beams for propulsion. P. 192. The first indication that microwaves might be used for propulsion came about when it was discovered that microwave beams could move objects made from a certain kind of material. P. 194. Through testing, it was discovered that the best propulsion effect occurred in materials that had a certain magnetic property. It was found that the effect was very frequency sensitive; they were only observed within certain frequency bands characteristic of the particular material. P. 195. SAPRO: Information gathered from a variety of sightings suggest that many ufo discs propel themselves by means of phase conjugate microwave beams. In his book "Unconventional Flying Objects", Paul Hill reviews a number of sightings that propelled themselves by downward directed force field beams. P. 260.

306 military abuses of Roswell citizens, alleged WITOROS: RAAF Lt Arthur Philbin, MP Threats ; RAAF Col Walter C. Lucas MP Threats; Hunter J. Penn: Alleged to be the military figure that threatened Roswell area residents in the weeks and months after the July 9th event. The only reference for this was Penn's daughter, as interviewed by Anthony Bragalia.

307 military psychic programs Army: Stargate

308 Milky Way galaxy

309 Mind MEMOT: The informational nature of peptides led Francis Schmitt of MIT to introduce the term "information substances" in 1984. P. 184. The physical substrate of the mind is the body, including the brain. The mind is what holds the three networks; nervous, immune, and endocrine system, together. The organism can be viewed as an information network. Intelligence in the form of information flow runs the system and creates behavior. It has been called the wisdom of the body. This view is heretical to the classical view of the "mindless clockwork of the universe" p. 185. Although much of the wisdom of the body takes place at the autonomic unconscious level, it is possible for the conscious mind to interact with this system. For example in the mediation and modulation of the experience of pain via endorphins. Data shows that changes in the rate and depth of breathing produce changes in the quantity and kind of peptides released from the brainstem. p. 186. The immune system, like the central nervous system, has memory and the capacity to learn. Thus it could be said that "mind" intelligence is located not only in the brain, but also in the cells

distributed throughout the body. Thus the traditional separation of mental processes, including emotions, from the body, is no longer considered valid. P. 187.

310 mind as emergent property of brain IRRMND: Regarding Mind and body (matter), philosopher Thomas Nagel asks if there is a way to bring mental phenomena into a unified conception of objective reality. Searle has a physicalist answer: consciousness emerges; it is a system level property of the brain. Author Kelly sees a problem with mind as an emergent property of the brain: normally emergent properties begin with and emerge to systems that are indisputably physical in nature, and thus can be measured. This is clearly not the case for properties of the mind. If the brain 'causes' the mind, then there should be specific correlations between brain and mind processes. Kelly et al argue that there exist certain kinds of empirically verifiable mental properties, states, and effects that appear to outstrip in principle the explanatory potential of physical processes occurring in brains.

311 mind brain reducer model of consciousness

312 mitogenetic rays: radiation GHAI: Early in this century more than 500 scientific papers, describing experiments that absolutely proved their findings, described mitogenetic rays emitted by plants. Alas, the mitogenetic effect turned out to be rubbish and was committed to the trash heap. Yet for some 40 years after this, men of science kept publishing mitogenetic ray experiment results in highly respected journals. p. 263 FIELD: a weak radiation, from tissues stimulates cell growth in neighboring tissues of the same organism. A precursor to what are today called biophotons.

313 MKULTRA military program to control human behavior. A truth serum was sought

314 modern cosmology TPT: In the 1960s, cosmology was a science "with 2 or 3 numbers". In 1960s textbooks, there were two aspects of cosmology; the history and evolution of time, space, and matter in the universe, and galaxies and clusters of galaxies that astronomers study. Jim Peebles became convinced that galaxies must play a key role in the evolution and large scale structure of the universe. This meant that galaxies must play a role in Einstein's GTR. In the early 1970s, Peebles published "Physical Cosmology". In the introduction, he mentions Einstein's cosmological constant, considered an unnecessary complication. The math allowed for it, but because it made the physics too bizarre and troublesome, everyone ignored it. 25 years later, the CC would make a comeback with a vengeance. The picture of the universe emerging by the time of the 1996 Critical Dialogs in Cosmology conference in Princeton was bizarre. It seemed we understood much less about the universe than we originally thought. A large portion of it appeared to be in the form of 'dark matter' and 'dark energy'. The case for a dark universe emerged forcefully in a discussion of the large scale structure of the universe.

315 moonlets AAGEN: Keyhoe stated that since 1953, the AF had known that giant spaceships were operating near our planet. Long range radar showed that several giant objects were orbiting near the equator. Keyhoe's story was supported by investigative journalist Warren Smith, whose CIA informant told of objects orbiting earth. Other details of this story were also confirmed. P. 205. News of This project leaked to the media and public, where it was transformed into a search for natural "moonlets". A NASA press release in Oct 1954 stated they had picked up strange signals from an unknown orbiting object. This report was corroborated by a French astronomer who had himself picked up strange signals. P. 209

316 morphogenesis How the human body, or biological bodies in general, develop. Current mainstream theory assigns that task to DNA and proteins, but the question is, how do cells differentiate and find their way to the right place. Alexander Gurwitsch thought it might be mitogenetic radiation; Popp believes biophoton emission may orchestrate body processes; Rupert Sheldrake suggests morphic, or morphogenetic fields may be the answer.

317 Morphogenetic field HANDSOL: : Rupert Sheldrake proposed morphogenetic fields serve as blueprints for behavior as well as form. Lyall Watson in his book "Lifetide: the Biology of Consciousness" describes the Hundredth Monkey Principle; where after a group of monkeys learned a new behavior, suddenly monkeys on other islands with no normal means of communication learned that behavior. P 27. This could be an example of a morphogenetic field

318 MRI Magnetic Resonance Imaging: A (pulsed) magnetic field is applied to the body tissue, which causes the spin of water molecules to accelerate, then slow down. As the water molecule slows down, radiation is emitted. Schempp found that this radiation contained encoded holographic wave information about a slice of the body, to which the machine uses Fourier transforms, and combines the slices to construct a 3 D optical image of the body.

319 MUFON Mutual UFO Network

320 Multiple personality disorder

321 Mystical Experience TSN, IRRMND, GHOSTIC, REALDE

322 NAS National Academy of Sciences. Steward Udall, and Dr Paul Tyler, former director of the Armed Forces Radiobiology Lab at Bethesda MD, characterized the NAS, most of whose members were dependent on grants, as being more political than scientific

323 NASA

324 National Research Council

325 National Security Act UFOs: On Sept 15, 1947, only 4 months after the Kenneth Arnold sighting, and only 2 months after Roswell, Truman signed this act into law, which among other things created the National Security Council and the Air Force as a separate branch of service, united the military branches under a "Department of Defense", and created the CIA.

326 NDEs Near Death Experiences: Blind, shared (among several people including those not dying), entity (interaction with entities), veridical (revealing verifiable information), healing, Myth of Er (Earliest account of a NDE: the story of Er as described by Plato in his Republic), Peak in Darian (The dying person sees, and often expresses surprise at seeing, a person whom they thought was living, but who had died recently), death bed visions. REALDE: blind, shared, entity, veridical, healing; TSN: myth of Er, entity; IRRMIND: NDES, peak in Darian, veridical, death bed visions; SPOOK: Researcher who interviewed more than 700 people about their NDEs, and reported that 105 had unpleasant experiences. P. 286. SPOOK: Pure Land Buddhists, who date back to A.D. 400, believe that certain extreme forms of meditation can induce NDEs. One of the junior monk's duties was to sit at the deathbed of elders and write down their visions of the Pure Land. P. 286. FOG: Pam Kircher, physician at M. D. Anderson, trained to help patients at the end of their lives. She noticed that routinely dying patients talked with deceased relatives. At first she thought they were hallucinating, so she devised a test. She would interrupt the conversation with deceased aunt Sally, asking a question. They would stop their conversation with aunt Sally and politely respond, and then continue their conversation with aunt Sally. Kircher says that a hallucinating person cannot be pulled back to reality, but her patients could be pulled back. P. 228 f.

327 Neoplatonism

328 neural correlates of emotion FOG: Davidson demonstrated that mental exercise can sculpt a person's mental circuitry, just as weight lifting can sculpt biceps. Earlier studies showed that people with higher brain wave activity in the left prefrontal cortex reported feeling more alert, energized, enthusiastic, and joyous. People with higher brain wave

activity in the right prefrontal cortex reported more worry, anxiety, and sadness. Newberg studied the brain patterns of Tibetan monks, Franciscan Nuns, Sikhs, Pentecostals. He found that those in meditative states, whether Christian nuns or Buddhist monks, showed the frontal lobes glowed red with activity, while the parietal lobes (the orientation area) remains dark. The frontal lobes handle the details, helps plan and execute tasks, keeps you alert and focused. Those in Pentecostal/charismatic states showed the reverse pattern: parietal glows red and frontal dark. Temporal limbic system, hippocampus, amygdale.

329 neural networks Hopfield model: simplest neural network model, with neurons either on or off

330 Neural networks and Connectionism CTM IRRMND: Kelly calls Neural networks and connectionism the Second Cognitive Revolution. Discouragement with the progress of classical or symbolic cognitivism led to a different style of computation: propagation of activity through large networks of elementary units, or neural nets. This approach harks back to the work of Donald O. Hebb. Rosenblatt did some work on 'perceptrons', but the mainstream lost interest thanks largely to a devastating critique by Marvin Minsky. Networks burst back into the mainstream with the publication of a handbook on parallel distributed processing, or 'Connectionism' as it came to be known. The fundamental faith of connectionists is that intelligence emerges from the interaction of large numbers of simple processing units organized in a network of appropriate structure. Although initially promising, significant problems have arisen. Although network models are said to be 'neurally inspired', the current level of neurophysiological realism is typically very low. Both the neurons and their connectivity patterns are routinely idealized and distorted, and the most successful learning rule, back propagation, has no recognizable counterpart in the nervous system. Models often have large numbers of free parameters which need to be tweaked for specific situations, raising doubts about their generality.

331 Neurocardiology GLOSSERY: In the 1970s a small group of cardiovascular researchers joined with a similar group of neurophysiologists to explore areas of mutual interest. This represented the beginning of the new discipline of neurocardiology. One of the early pioneers in neurocardiology, Dr. J. Andrew Armour, introduced the concept of a functional "heart brain" in 1991. His work revealed that the heart has a complex intrinsic nervous system that is sufficiently sophisticated to qualify as a "little brain" in its own right. The heart's brain is an intricate network of several types of neurons, neurotransmitters, proteins and support cells like those found in the brain proper. Its elaborate circuitry enables it to act independently of the cranial brain – to learn, remember, and even feel and sense.

332 Neuropharmacology MEMOT: Initially, neuropharmacology focused on neurotransmitters traveling across synapses p. 137, where the electrical and chemical brain seemed to merge. Then, new data showed that receptors in far flung areas were effected by neuropeptides. It was concluded that the largest portion of information in the brain was kept in order not by synaptic connections, but by the specificity of the receptors. The brain was more like the endocrine system, whose hormones can travel through the entire body. For several years this data was attributed to artifacts of experimental technique and ignored. Around the same time, a high profile neuro scientist, Francis Schmitt, proposed a p. 139 secondary route, where chemical information traveled the extracellular fluids to reach their target receptors. His idea was readily accepted.

333 neuropsychology

334 neurotransmitter chemical messengers; endogenous chemicals that transmit signals across a chemical synapse. Includes serotonin, dopamine, endorphins

335 neutron stars TPT: A neutron star is so dense that a single teaspoon would weigh ten trillion pounds, but it is not yet a dark star; the escape velocity would be 80% of the speed of light. In 1974, two American astrophysicists, Joe Taylor and Russell Hulse, found two neutron stars orbiting one another. In 1978, Taylor announced that the orbit was shrinking in the manner Einstein had predicted. Because of this it was proposed they were losing energy through gravitational radiation. This helped to confirm that gravitational waves were real. See also BHW.

336 Newtonian mechanics Newton's famous book Principia explained his use of calculus to describe the motion of objects in space, described by his three laws of motion. This work, which in principle claimed to be able to predict motion of the universe was hailed for several centuries until it was largely supplanted by Einstein's theories of Special and General relativity. In the later 20th century, Newton's mechanics developed the reputation of imposing a strictly mechanical or materialistic interpretation on the universe; the Newtonian world view.

337 NIDS National Institute for Discovery Science: an organization funded by Robert Bigelow to study scientific anomalies. It is no longer functional

338 Nolan Lab at Stanford PHENOM: Kit Green and his colleagues diagnosing *anomalous injury* sought out Garry Nolan for help. Nolan runs Nolan Lab at Stanford, and is one of the world's leading research scientists specializing in genetics, immunology, and bioinformatics. In 2012, Nolan was awarded a 3.3 million dollar grant from the DOD for advanced cancer studies??? The lab is known for large scale mapping of cellular features at an unprecedented level of detail. Nolan met and worked with many of Green's patients. He agrees that in many cases it looks as if an EM field of some sort "...has led to inflammation and other biomarkers in their bodies that can be seen in MRIs, tissue, and blood. We are now working on the genetic and epigenetic components." Nolan said. p. 398 Both Green and Nolan think there is more to his patient's injuries than just damage from high energy devices. "Some people seem to repeatedly attract the phenomena or the experiences" Nolan says", like antenna. P. 399

339 NSA National Security Agency

340 nuclear reaction GLOSSERY: Nuclear fission is the splitting of a heavy, unstable nucleus into two lighter nuclei; fusion is the process where two light nuclei combine together releasing vast amounts of energy. There are numerous types of nuclear fusion. Some examples: Bubble fusion or sonofusion is the non-technical name for a nuclear fusion reaction hypothesized to occur during a high-pressure version of sonoluminescence . Now called a low-energy nuclear reaction (LENR), the process once called "cold fusion" may promise a new energy source. Although much maligned in the past, new evidence has come to light supporting its validity.

341 nuclear weapon Atomic bomb: weapon with great explosive power that results from the sudden release of energy upon the splitting, or fission, of the nuclei of a heavy element such as plutonium or uranium. Hydrogen bomb: An immensely powerful bomb whose destructive power comes from the rapid release of energy during the nuclear fusion of isotopes of hydrogen (deuterium and tritium), using an atom bomb as a trigger.

342 numinous TSN: imaginal or anomalous experiences: UFO; alien; abduction; NDE; Gnostic; Tantric; ESP; DMT/drugs; hallucination; folk lore; religious demonology and angelology; New Age; light forms; Theosophy; reincarnation;

343 nutercane GHAIR: A small freak violent storm that builds up and dissipates quickly, so it does not show on a weather map. P 208

344 Office of Alternative Medicine MEMOT: CAM Complementary and Alternative Medicine: This office was established within NIH in 1992 to evaluate alternative therapies, including acupuncture, homeopathy, manipulative healing techniques such as massage, visualization and biofeedback. Although its budget in 1996 was only .1 of one percent of NIH's funding, it was directed by people with integrity, such as Wayne Jonas.

345 OPSEC US military operations security

346 Orch OR TSN: Orchestrated Objective Reduction: Theory put forward by Roger Penrose and Steven Hameroff: consciousness arises when non-computational processing is formed by qbits on cell's microtubules. Unlike a

bit, which has only one state, a qbit has 2 states; positional and superpositional, which open it, because of the nature of nonlocality, , potentially to vast presence

347 orgone energy REALDE: Existence of orgone energy proposed by Wilhelm Reich in 1930s, who claimed it flowed freely around the earth. He invented orgone accumulators and made claims about their therapeutic capacity. p. 52. He was arrested and died in prison in 1957. The courts ordered his materials destroyed and his books burned. It is ironic that at that time Nazi book burning was condemned for suppression of free thought. PLAPOWD: Devereux and Mitchell note that Wilhelm Reich's Orgone Accumulator was constructed of alternating layers of organic materials (to attract the energy) and metallic materials (to radiate the energy toward the center of the box). They note that many of the greatest works of the megalithic builders involved the construction of a hidden chambers lined with alternating layers of organic and inorganic materials, and suspect these builders were aware of some form of "life energy".

348 origin of DNA FORBIDU: In order to replicate, DNA requires certain proteins in the form of enzymes to act as catalyst, but no protein can be produced without DNA in the first place. At present only untestable theories seek to explain how this happened.

349 Over Unity energy PHENOM: DIA sources told Jacobsen that ETI, a subsidiary of Institute for Advanced Studies at Austin, has maintained a DOD contract to investigate over-unity energy claims. Puthoff says all the claims have been disproven so far, and the results are made public on the ETI website. P. 388. Note that "over-unity energy " is not the same as anti gravity. SAPRO: LaViolette notes several types of antigravity technologies, discusses the physics behind them, and notes government disinformation campaigns to keep this information from the public.

350 p-adic number system NPM : P-adic: a number system based on powers of prime numbers

351 panspermia FORBIDU: The Hermetic idea that the seeds of life are scattered throughout the universe was championed by Giordano Bruno and Athanasius Kircher. That theory was also expressed by the German physicist Hermann von Helmholtz and British physicist and engineer Lord Kelvin. The modern conception is that life is a cosmic imperative. Astrobiology reveals that many of the building blocks of life are found in space. These chemicals can be transferred to earth from meteorites and a dusting from the tails of comets. The nucleus of a comet exploding over Murchison Australia in 1969 was found to contain 70 different amino acids. NASA Ames tested common gasses in the space environment. Ames lead scientist Louis Allamandola noted: "When I see this kind of complexity forming under these extreme conditions, I begin to really believe that life is a cosmic imperative."

352 Paradigm Shift FOG: Normal science, Thomas Kuhn observed, "often suppresses fundamental novelties because they are necessarily subversive of its basic commitments". Data that is produced by scientists that challenge the prevailing consensus is often dismissed as simply wrong. Eventually, the dissonance between prevailing and new may become so great that a paradigm shift occurs

353 parapsychology The scientific and scholarly study of certain unusual events associated with human experience. A long-held, common-sense assumption is that the worlds of subjective and objective are completely distinct, with no overlap. Subjective is 'within us, inside our minds,' and objective is 'out there, in the world.' Parapsychology is the study of phenomena suggesting that the strict objective/objective dichotomy may instead be part of a spectrum, with some phenomena occasionally falling between purely subjective and purely objective. We call such phenomena 'paranormal' or 'anomalous' because they are difficult to explain within current scientific models. These anomalies fall into three general categories: ESP [extrasensory perception, such as telepathy and clairvoyance], PK [psychokinesis, or anomalous mind-matter interactions], and phenomena suggestive of survival of bodily death, including near-death experiences, apparitions, and reincarnation.

354 Parton model CONQUARK: Feynman's parton model was intended to be used phenomenologically to give structure and coherence to the experimental program at SLAC. However, it implies that the proton is made of a single amorphous cloud of partons, and Partons quickly became identified with quarks for most particle physicists. This led to unavoidable and theoretically unjustifiable assumptions.

355 past life regression GNOSTICS: Cathars vie with ancient Egyptians and Tibetans as the most popular subjects

356 past lives FIELD: some believe that recollection of past lives, especially from children, are due to "tuning into" the ZPF, not actually past lives.

357 Pauli Effect PHENOM: there were numerous instances of technical equipment malfunctioning, falling, or sustaining unusual damage when Wolfgang Pauli was in the lab. Pauli wrote an article titled "Background physics", in which he discussed the relationship between physics, the conscious, and the unconscious. p. 175

358 Pauli Exclusion Principle FAUST: In 1924, Wolfgang Pauli added a fourth quantum number, which could have only a value of $+1/2$ or $-1/2$, and developed the idea that no two electrons could have the same quantum numbers, a principle now called the Pauli exclusion principle

359 PEAR lab Princeton Engineering Anomalies Research Lab. Robert Jahn wrote an original paper "Information, Consciousness, and Health", appearing in "Alternative Therapies", May 1996. This paper summarized Jahn and Dunne's book: "Margins of Reality", which summarized their work in the PEAR lab. Based on some 50 million experimental trials, it has been found that anomalous correlations of machine outputs with pre-stated operator intentions are clearly evident. These results have been contested by some, and the PEAR project at Princeton, having completed three decades of research, has been shut down. However, the program continues as part of a broader venue of the "International Consciousness Research Laboratories" (ICRL), chartered in the State of New Jersey. FIELD: Provided scientific protocol for experiments in ESP: In trials with same sex pairs, results were slightly poorer than each individual; opposite sex pairs did much better, and intimate pairs did even better. FIELD: One of the questions that arose from the PEAR studies was ownership of thought. If machines can be influenced by human thought, it begged the question of where the human thought is. Where is the human mind? P.126

360 pendulum INFINMND: to test chakras. Exhibits circle or ellipse, showing field motion; except only back and forth in the case of functional disturbance. P. 70. WHEELSOL: NEEDS TO BE A crystal pendulum: Suspended over a chakra as a pendulum, a crystal may corroborate this movement, because the crystal is an effective energy transmitter: cw circular, cw elliptical, ccw circular, back and forth, or stationary.

361 Pentacle memo AAGEN: Hynek document dated Jan 9 1953, written by staff of Battelle M. I in Colos OH as regarding what can and cannot be discussed by the Robertson Panel.

362 Peptide T MEMOT: Candace Pert and Michael Ruff found that one peptide displaced HIV protein in T4 receptors, which appeared to provide a non-toxic treatment for AIDS. They called this Peptide T. When NIH ignored this potential treatment, Pert resigned to pursue its study. At times Peptide T then became considered a joke or hoax in mainstream medicine. P. 233. Although finding several sources of funding, and in spite of clinical trials showing Peptide T's value as a treatment, and in spite of several multi million dollar funders to carry the project forward, Peptide T has remained in the background. In the latest developments as of the writing of MEMOT, an additional receptor, the chemokine receptor, in addition to the T4 (CD4) receptor, are required for the entry of the HIV virus to enter the T4 cell. P.317. Pert found that the peptide sequences of the chemokine receptors were similar to Peptide T. Could Peptide T be the antagonist for the chemokine receptor? Peptide T is at the time of this book writing is being evaluated as a gp120 antagonist. P. 317f.

363 peptides MEMOT: There are 88 known peptides in the human body (1997). There may be as many as 300. Every peptide, no matter where discovered in the body, is actually made in many parts of the body, and often in the brain. P. 70. Oxytocin was the first peptide to be replicated outside the body. It is released in the pituitary gland, and facilitates uterine contractions, promotes maternal behavior, and helps some male rodents find long term monogamous relationships. This unifying function of peptides, coordinating physiology, behavior, and emotion toward what seems to be a coherent meaningful end, is very characteristic of humans and animals. P. 68. Candace Pert's believes peptides are the physiological substrates of emotion; the molecular underpinnings of what we experience as feelings, sensations, thoughts, drives, awe, bliss, and other states of consciousness; perhaps even spirit or soul. There is much evidence to support this theory. P. 130. In the 1950s, Bruce Merrifield of Rockefeller U developed a way to speed up the exogenesis of peptides by a process called solid-phase peptide synthesis, now commercially available. This has led some to try to improve on natural peptides. Many previously known substances turned out to be peptides, as for example, insulin. Although peptides are deceptively simple, the responses they produce can be very complex. The complexity has resulted in they being labeled under a wide variety of categories, including hormones, neurotransmitters, peptides, growth factors, leukins, cytokines, and chemokines. The single celled animal, the tetrahymena, makes many of the peptides, including insulin, and the endorphins, that humans do. P. 193.

364 Peptides and Cancer MEMOT: Neuropeptides can signal cancer cells via their receptors and cause them to grow and travel (metastasize). They do this by chemotaxis, or movement to the peptide location. Could excess or inappropriate production of peptides released by the immune system, p. 172 or the brain, or by any other organ promote other forms a cancer? Ruff and Pert showed that besides immune cells, many different kinds of cancerous cells can chemotax according to peptide signals. The Cancer Institute ignored their results, but after a decade finally got around to re-discovering their results on the relationship between peptides and cancer. P. 174. The idea of blocking a growth peptide by using a receptor antagonist, and of providing growth peptide in the hopes of causing the cancer cells to differentiate and stop dividing, were both explored by Ruff and Pert, and are examples of the new field of peptide pharmacology, as opposed to the old toxic treatments.

365 phantom airplanes GHAI: Phantom fighters and bombers appeared in the battle skies of Europe during WWII. The Phantom of Montrose, where a fighter pilot trying to land his Hurricane at night had to abort several landings because an ancient biplane suddenly cut in front of him. This aircraft was not seen by anyone on the ground. GHAI P. 96. Between 1939 and the end of the war, the aerial struggles were fought fiercely with terrible casualties on both sides. As the air struggles continued, stories began to emerge. It seemed that the impossible happened again and again. GHAI P. 97 A red German Fokker triplane from WWI was seen by most members of a squadron of Hurricane fighters during WW II. The pilot of the ghost airplane was known as the Red Baron Manfred von Richthofen, the ace of aces in WW I. p 100. According to RAF records, both German and English WW I biplanes appeared to English squadrons during WW II. Similar records appear in German combat histories. GHAI P. 101. A WW II English Handley-Page Whitley bomber was a phantom in WW II. Eye witness accounts were legion; and startlingly similar; no one was at the controls of this phantom ship. GHAI P. 105. 12 Douglas DB-7 Bostons were sent on a bombing raid from England to Germany. The air marshal heard what he took to be sounds of 3 or 4 returning bombers landing. The crews of 3 returning bombers appeared before him. They filled out debriefing intelligence reports, and were dismissed. An aid reported to the air marshal that all 12 bombers had been shot down. The 3 crews were not seen again. P. 108

366 phase DECODE: phase transitions

367 Phenomenology Social scientist Cynthia Nelson has described this as the attempt to communicate the quality and structure of experiences

368 Philadelphia Experiment SAPRO: William Moore and Charles Berlitz wrote a book, "The Philadelphia Experiment". This was said to be a classified research project conducted in the Philadelphia Naval Yard in Oct 1943,

whose alleged objective was to render a naval vessel invisible both to radar and the naked eye. Einstein, Vannevar Bush, John von Neumann, and Nikola Tesla were said to have worked on this project. There is reason to believe that in his Navy career, T. T. Brown may have had something to do with this experiment. The book sites letters attributed to a former sailor, which suggests the USS Eldridge was made invisible when it enveloped itself in a very strong magnetic field. According to the letters, the crew of the ship experienced horrendous physical and mental side effects and the project was immediately terminated. Although difficult to separate fact from fiction here, lab research has shown that a metal object can be made radar invisible by high intensity magnetic fields. P. 26 f. While the Navy claims the Philadelphia Experiment is entirely myth, Brown's own hesitation to speak on the subject suggests something very important and highly classified was going on. P. 35.

369 Phonons GLOSSERY: Literally a "particle" of sound. Atoms in a crystalline lattice vibrate. Only certain vibrational modes are possible. Each vibrational mode is characterized by its mechanical energy. Only a few modes are active at low energies, and these are acoustical modes. As mode energy increases, at a certain point many modes become active. These are optical modes. An electron can give energy to a lattice, in which case it excites an available mode. An electron can also acquire energy from a lattice, in which case a vibrational mode dissipates. It is easy to think of these vibrational modes as particles, which are called phonons. Then you can talk about phonon emission by an electron or phonon absorption by an electron. The same principle applies to photons, in which case photon emission by an electron or photon absorption by an electron may occur. Photon and phonon emission and absorption are important energy exchange mechanisms in semiconductors. Phonons are therefore quanta of lattice vibrations.

370 photo repair FIELD: the process by which body tissue is repaired. Popp found that it works most efficiently at 380 nm, the same wavelength carcinogens react to and scramble.

371 Photon GLOSSERY: Mainstream physics considers that light has a wave characteristic as well as a particle characteristic. The particle characteristic is defined as a quantum of light. Recent research has indicated that the concept of the photon is far more subtle than has been previously thought. Photonic crystals : Periodic optical nanostructures that are designed to affect the motion of photons in a similar way that periodicity of a semiconductor crystal affects the motion of electrons. Photonic crystals occur in nature and in various forms have been studied scientifically for the last 100 years. Photon Bandgap Crystals : Materials patterned with a periodicity in dielectric constant, which can create a range of 'forbidden' frequencies called a photonic bandgap. Photons with energies lying in the bandgap cannot propagate through the medium. This provides the opportunity to shape and mould the flow of light for photonic information technology.

372 Photosynthesis nature.com/scitable/topicpage/photosynthetic-cells- : Photosynthetic cells are quite diverse and include cells found in green plants, phytoplankton, and cyanobacteria. In photosynthesis, cells convert carbon dioxide and photons from the Sun to glucose and oxygen, which are then converted to energy substances such as ATP. Excess oxygen is released to the atmosphere, and carbon dioxide is produced as a waste product. Central to this process is chlorophyll. While iron is the element that makes hemoglobin red, magnesium is the element that makes chlorophyll green.

373 physics constants Planck Length; Planck Time; cosmological(λ); Hubble: red shift; Fine Tuning of Universal Physical Constants: Physicist Paul Davies observes that "There is now broad agreement among physicists and cosmologists that the Universe is in several respects 'fine-tuned' for the building blocks and environments that life requires, and is in this sense 'fine-tuned' for life. A slight change in the magnitudes of the weak and strong interactions, gravitational constant, electromagnetic interaction, electron mass, proton mass, speed of light, Planck's constant, or Boltzmann's constant would have made life on earth impossible. ; fine structure constant

374 Pineal gland DMTSM: The pineal is unique within the brain. All other brain sites are paired, as in left and right. Descartes proposed the pineal was the "seat of the soul". The intermediary between spiritual and physical. Melatonin hypothesis of pineal function; Psychedelic hypothesis of pineal function. Strassman's belief, based on his studies, is that the pineal produces psychedelic amounts of DMT at crisis times in our lives: conception, birth, and death. In some cases, pineal DMT mediates meditation, psychosis, or NDEs. The human pineal becomes visible on the developing fetus at 7 weeks, or 49 days after conception. This is also the time at which sexual differentiation occurs. Tibetan Buddhist Book of the Dead teaches that it takes 49 days for the soul of the recently dead to 'reincarnate'.

375 placebo A medicine or treatment with no apparent therapeutic benefit, but which apparently provides therapeutic benefit to a patient.

376 Planck length, time, and constant NPM: Time and space are considered granular; the smallest distance and a smallest time are the Planck length and Planck time. Planck's constant gives us the smallest size of a quanta.

377 Planetary Society, the WAITFC: Founded in 1980 by Carl Sagan, Bruce Murry, and Louis Friedman, who feared space exploration was boring congress and the public. It was conceived of as an advocacy group. Over the years, it has raised money to finance research overlooked by NASA, educated the public, and lobbied for space exploration.

378 plant consciousness Psychologytoday blog Dec 9 2014: "Smarty Plants: Research Shows they Think, Feel, and Learn"; Plant brain: Darwin said: the root tip, or radicle, "acts like the brain of one of the lower animals" plant ESP:INTENT: In the book The Secret Life of Plants, by Bird and Tompkins, Clive Backster shows that plants can read thoughts; SLPLANTS: plant telepathy: COSSER: Amazonian Shaman listen to plants. SLPLANTS: celestial vegetal sensor

379 plasma PHILSPEAT: In physics, a plasma is defined as a gas composed of charged particles. In plasma, the motions of individual atoms is more complex than in a superfluid or superconductor, because the motion of the gas particles is determined not only by the quantum (globally organizing) wave function, but also by local effects. David Bohm, who formulated the wave function for plasma, said at the time that he had the sense that the plasma was "alive". TSN: The Condign report on UAPs saw them as a kind of plasma which may generate novel perceptions via temporal lobes. SAPRO: A plasma may be formed up and down stream of an air vehicle to induce the electrogravitic effect, which can improve vehicle performance. In 1994, BAE (British Aerospace) became interested in Russian research into plasma air drag reduction. P. 393-4.

380 poly-phenomenal characteristics REALDE: Term used to describe multiple aspects of anomalous phenomena. For example, a UFO event might also include telepathy, an abduction event, and an anomalous time event.

381 prayer Can aid in healing; can have a retroactive impact on healing. INFINMND: Double blind study on the effect of prayer on patients in the Coronary Care unit showed positive effects for prayer.

382 Precognitive Sentient Phenomena (PSP). REALDE: Where the phenomana seems to be in control of the events, and can seem to anticipate, for example, a UFO researcher's activities. J. B. Alexander's term

383 Prime Numbers WIKI: A prime number is a natural number (integer) greater than 1 that cannot be formed by multiplying two smaller natural numbers. A natural number greater than 1 that is not prime is called a composite number. NPM: Scientists note a series of physical and biological systems in which prime numbers play an important role. For example, the fine structure constant value of 137 is a prime number. Kumar Ivanov, and Stanley: "Information Entropy and Correlations in Prime Numbers": "Examples range from the periodic orbits of a system in quantum chaos to the life cycles of species. Recent work reports on a potential for which the quantum energy levels of a particle can be mapped onto the sequence of primes. Furthermore, it has been shown that a gas of independent bosons

with energies equal to the logarithm of consecutive primes possesses a canonical partition function coinciding with the Riemann function.”

384 Principles of Psychology IRRMND: A book by William James. The earliest English survey of psychology still widely cited today, published in the US in 1890 by William James. The two volume work considered the internal world of human mental life, as well as external behavior, and the relationship between them. This work relied on sophisticated observation of his own inner workings, of central properties of mental life such as attention, imagination, stream of consciousness, and self.

385 project aquarius OUTTHERE: Naval intelligence and DIA accepted the legitimacy of the demo and launched a classified RV ops to seek soviet subs called Project Aquarius. Over the next 14 months there were at least 17 recorded sightings of hovering UFOs by the RVers, according to Blum. “It’s a flying saucer”

386 Project Bluebook Special Report no. 14 UFOS2DAY: Refuted two of the most prominent theories used to discredit ufo sightings: lack of credible information and witnesses, and known but misidentified objects. Still, this report was used to argue that the UFO phenomena was insubstantial.

387 Project Deep Quest Military sponsored remote viewing project to 1) locate a sunken ship, and 2) read maps, charts, etc. through deep water. The test was successful

388 Project Mogul ROSINCON : A formerly classified research project, according to Pflock, intended to determine if a postulated “acoustical duct” in the tropopause could be used to detect rockets passing through the tropopause, as a kind of early warning system. WITOROS: Although the mission was classified, much of the hardware was off the shelf, and what was not off the shelf would not be recognized as significant by the general public.

389 Project Ozma OUTTHERE: In the late 1950s, Frank Drake, Phillip Morrison, and Giuseppe Cocconi tried to come up with the optimal electromagnetic frequency for possible extraterrestrial communication. The low end of the EM spectrum was cluttered with thick cosmic static; high frequencies are absorbed by the earth’s atmosphere. They settled on microwave radiation as the only logical choice for aliens to transmit. But what microwave frequency? They decided it must be the frequency of energy emitted by hydrogen gas, the most abundant element in the universe, the 21 CM line of neutral hydrogen at 1420 megahertz; in the nearly noise free microwave window. Drake had the appropriate receivers built at the National Radio Astronomy Observatory in Green Bank West Virginia, and Project Ozma conducted 150 hours of star searches, finding nothing. P. 106

390 Project Sign, Grudge, BlueBook AAGEN: At the recommendation of General Nathan Twining, Project Sign began in 1947, to study the subject of flying saucers. J. Allen Hynek, who joined Sign in 1948, wrote of a division in opinion of the officers assigned to Sign A Top Secret “Eastimate of the Situation,” suggesting there might be something to the phenomena, was prepared. Hoyt S. Vandenberg, Lt General Deputy Chief of the Army Air Forces rejected Project Sign’s report, and had all copies of it destroyed before being released. Sign’s final report, dated autumn 1949, reported nothing of interest. Project Sign was secretly transformed into Project Grudge in Feb 1949, with the express purpose of assuring the public that all sightings were of natural phenomena. Air Force Captain Edward J. Ruppelt, who would later head Project Blue Book stated “this drastic change in official attitude is as difficult to explain as it was difficult for many people who new what was going on inside Project Sign to believe...” OUTTHERE: Project Blue Book was the most ambitious of the official UFO investigations. Headed by Ruppelt, who renamed the phenomena “UFOs”, It lasted for `7 years, and Blue Book officers had been assigned to every Air Force base in the nation. A number of institutions were consulted which might offer conventional explanations. More than 13000 cases had been examined, and the study reportedly found no indication of anything unfamiliar. On Dec 17, 1969, the Secretary of the Air Force terminated. Blue Book. P. 68. AAGEN: Unexplainable reports went to what Ruppelt called “another intelligence agency” Coral Lorenzen, who would become director of the Aerial Phenomenon Research Association (APRO) also came to suspect that Blue

Book was no more than a public relations setup. P203. Soon after the Robertson panel was dissolved, ranking members of the PBB began to leave the program. In 1956, Ruppelt published *The Report on Unidentified Flying Objects*, which was critical of the AF handling of the issue and supportive of the idea of ET visitation. P. 201. Two years later, Ruppelt wrote a letter to a member of the National Investigations Committee on Aerial Phenomena, reversing his position. Sounding much like a press release, he wrote "I have visited PBB since 1953 and am now convinced that reports of UFOs are nothing more than reports of balloons, aircraft, astronomical phenomena, etc." He died only 2 years later

391 Project Stork UFOS2DAY Battelle contracted to develop improved sighting questionnaires. Jennie stated that Project Stork began before Battelle's UFO work; it originated to determine Soviet capabilities for waging technological warfare.

392 pseudoscience originally used to describe alchemy. Today it is used to attack any concept judged to be unacceptable, regardless of the evidence supporting that concept.

393 psilocybin Psychedelic drug: tryptamine family: similar to serotonin; from "magic mushrooms"

394 psychic medium J. B. Alexander endorses as among the legitimate: Anne Gehman, Suzanne Giesmann, John Edward, George Anderson, Adele Tinning, Chico Xavier

395 psychoimmunoendocrinology MEMOT: In their papers Pert and Ruff summarized data suggesting that peptides found in the brain were the same as peptides found in the immune system, and that the nervous, endocrine, and immune system are functionally integrated into what looks like a psychoimmunoendocrine network. They proposed that this network be seriously considered in explaining not only the pathology of cancer, but also other disease states as well. Ruff & Pert's work did help legitimize the new field of "psychoneuroimmunology" (PNI). This name was used rather than Pert's suggested name of psychoimmunoendocrinology, which is more descriptive and less redundant. Pert also dropped the "neuro" from "neuropeptides", since these were produced all over the body. P. 177

396 Psychoneuroimmunology

397 Psychological Automatism IRRED: Where additional psychological entities indistinguishable from individual conscious minds or personalities occupy the same organism simultaneously, carrying on their varied existences in parallel, and largely outside the awareness of the primary everyday consciousness. Automatic writing, multiple personality syndrome, and channeled entities are examples of automatism and centers of consciousness

398 psychosis

399 psychometry token-object reading, or psychoscopy, is a form of extrasensory perception characterized by the claimed ability to make relevant associations from an object of unknown history by making physical contact with that object. Wikipedia

400 Puharich theory He believed an energy force, present in all animals and insects, radiated somewhere on the EM spectrum but that man had not yet technology to measure or record it.

401 Pulsar TPT: Jocelyn Bell discovered a periodic spike in quasar data at 81.5 megahertz. In 1968, a paper appeared in *Nature* titled "Observation of a Rapidly Pulsating Radio Source." A journalist from the *Daily Telegraph* called them pulsars and the name stuck. Pulsars were the first tangible evidence for neutron stars. They don't actually pulsate; they rotate, and were the missing link in gravitational collapse, posited by Lev Landau, studied by Robert Oppenheimer, and explored in detail by John Wheeler and his followers.

402 Pythagoreans HANDSOL: First to record in western literature the idea of Vital energy, perceived as a luminous body, around 500 BC. They held that its light could produce a variety of effects in the human organism, including the cure of illness.

403 QCD GLOSSERY: Quantum Chromodynamics : In physics, the theory that describes the action of the strong force. QCD was constructed in analogy to quantum electrodynamics (QED), the quantum field theory of the electromagnetic force. By analogy with QED, quantum chromodynamics predicts the existence of force-carrier particles called gluons, which transmit the strong force between particles of matter that carry "colour," a form of strong "charge." The strong force is therefore limited in its effect to the behavior of elementary subatomic particles called quarks and of composite particles built from quarks—such as the familiar protons and neutrons that make up atomic nuclei, as well as more-exotic unstable particles called mesons. The fact that quarks are never found in isolation has caused concern among some physicists. BHW: The mathematical theory of quarks and gluons. Physics: a possible theory of the strong interaction of quarks. it explained scaling, and observed deviations from scaling. QCD became the accepted theory of the strong interactions. Quarks had not yet been observed, but both electroweak and QCD theory assumed the validity of the quark identity.

404 QED GLOSSERY: Describes electromagnetic activity in terms of the massless virtual messenger photons. The photon is described in QED as the "force-carrier" particle that mediates or transmits the electromagnetic force. QED allows a procedure, using Feynman Diagrams, for calculating the results of any interaction between photons and electrons, however complicated. This theory is consistent with the principles of both quantum theory and relativity theory. The success of QED depended on using renormalization, a process in which infinities are just discarded. Renormalization was proved to be valid for QED.

405 Qigong therepeutic marshal art

406 quantum Biology FIELD

407 quantum computer

408 Quantum consciousness models NPM: Models which attempt to represent the relationship between quantum and biological processes to produce the phenomena of mind. A number of such models have been developed, including the following: John Eccles Dendron Psychon Quantum Consciousness Model; Penrose Hameroff Microtubule Quantum Consciousness Model; Fred Alan Wolf Atomic Quantum Consciousness Model; M.J. Donald Family of Switches Quantum Consciousness Model; Richard Mould Peptide Quantum Consciousness Model; Henry Stapp Three Process Quantum Consciousness Model;

409 quantum entanglement GLOSSERY: The state or condition in which an enduring confluence occurs between atomic and subatomic particles during energy exchange or other processes, characterized by a commingling of particle attributes, such as spin, in a persistent and congruent manner. Associated with entanglement is an instantaneous non-local, exchange of information through the medium of quantum correlation. This state was validated by Bell's Theorem, which was proved experimentally at the University of Paris in 1988 by a research team led by physicist Alain Aspect. They discovered that under certain circumstances subatomic particles such as electrons are able to instantaneously communicate with each other regardless of the distance separating them. Such particles are said to exhibit "non-locality." HANDSOL: Bell's theorem means Superluminal connectedness

410 quantum field theory

411 quantum gravity

412 quantum holography GLOSSERY: Permits the imaging of hidden objects with entangled photons. it's possible to build a hologram of the hidden object provided that the photons in the illuminating beam are entangled with photons in another beam. Each photon in an entangled pair has properties (such as momentum or polarization) that are unknown until a measurement is performed on one photon or the other. When a property of one of the photons is measured, corresponding information about its entangled mate is instantly determined. In quantum holography, the researchers measure the simultaneous arrivals of an illuminating photon that is sent into the chamber and a companion photon in the other entangled beam. This measurement tells the researchers about the interference of various possible paths that the single photon inside the chamber could travel. And it's the interference of the possible paths that encodes the holographic image of the hidden object. FIELD: Walter Schempp began to wonder if the math and theory of how the MRI worked could be applied to bio systems. He called his theory quantum holography, because what he really discovered was that all sorts of information about objects, including shape, is carried in the quantum fluctuations of the "ZPF", and that this info can be recovered and constructed into a 3-d image. He wondered if his math unlocked the secrets of the human brain. Schempp provided a math foundation for the work of Peter Marcer, who saw in Schempp's machine the same principles that Pribram had worked out for the human brain: by reading information from the "ZPF".

413 Quantum Mechanics models Matrix QM, Wave QM, Transformational QM; Bohmeian QM; Transactional QM; Heisenberg developed matrix mechanics in 1925. Some time later, in the winter of 1926, Schrödinger established his wave mechanics. In the autumn of 1926 Paul Dirac formulated the theory of general linear transformations, which corresponded to the canonical transformations of classical mechanics, and are nowadays known as the unitary transformations in Hilbert space. Dirac was the first to point out the difference between states and observables of a physical system, a distinction which was present in WM (wave functions/wave operators) but not in matrix mechanics, where only matrices were considered. How could then states be accounted for in matrix mechanics? The states were, according to Dirac, the eigenvectors of the matrix H of matrix mechanics, i. e. the elements of the transformation matrix of Heisenberg, which were just the proper functions of Schrödinger's wave equation. John von Neumann showed in 1929 that the Heisenberg and Schrödinger formalism are operator calculi on isomorphic (isometric) realizations of the same Hilbert space and hence equivalent formulations.http://www.lajpe.org/may08/09_Carlos_Madrid.pdf

414 quantum numbers numbers specifying electron configuration: Principal Quantum Number energy of electron (n); Angular Momentum quantum number (l); Magnetic Quantum Number (ml); spin quantum number (ms)

415 quantum optics FEYNBOW: one of the major issues was to describe how beams of laser light behave when they penetrate a material such as a crystal. P. 142

416 quantum teleportation DECODE: Teleportation dematerializes an object at position A only to make it reappear at distant position B at some later time. Quantum teleportation differs slightly, because we are only transmitting quantum information from particle A to particle B, but the principle is the same. One way of performing teleportation is to assemble all of the information about an object, and send this information to the location where the object is to be teleported. One problem with this approach is that you cannot determine an electron's spin by measurement, so you cannot assemble all the information. However, there is no need to learn the state of a system in order to teleport it. "All you need to do is use mutual quantum information, of the sort that exists on a quantum computer." This provides super-correlation between locations A and B (also known as quantum entanglement). Currently we can transport only individual atoms and photons over only a few meters.

417 Quark CONQUARK: By interpreting quarks as real, the choice of quark models and gauge theories is made to seem unproblematic. Gell-Mann abstracted the name 'quark' from James Joyce's Finnegans Wake. The lack of direct evidence did much to undermine the credibility of the quark model in its early years, but variants of the quark model

showed growing success in explaining a wide range of hadronic phenomena. The two principle variants could be traced back to Gell-Mann's model and Zweig's model, called the Constituent Quark Model.

418 quartz crystal WIKI: Quartz is a mineral composed of silicon and oxygen atoms in a continuous framework of SiO_4 silicon-oxygen tetrahedra, with each oxygen being shared between two tetrahedra, giving an overall chemical formula of SiO_2 . VOHEF: Russian Alexander Gurwitsch found that cell division, or mitosis occurred in onion stems when exposed to onion roots pointing at the stem. This effect also occurred when the stem and root were separated by a quartz plate, but not when separated by a glass plate. Gurwitsch Was also aware that normal window glass blocks UV rays while quartz glass plate transmits it. He concluded that onion roots emit UV radiation, which he called mitogenetic radiation. Fritz Popp confirmed that living tissue emits photons of UV (and other wavelengths) of light. VIBMEDA: Gerber notes the use of "Rose quartz light" in meditation, as rose quartz is said to absorb negative energy.

419 quasar Quasi Stellar Radio Source: TPT: Dutch astronomer Maarten Schmidt looked at radio object 3C273 in Ryle's and Lovell's 3C catalog. The spectral lines were unlike anything he had ever seen, but looking closer, he found they matched hydrogen, but dramatically redshifted. He found these objects littered throughout the universe. They were billions of light years away, and belting out huge amounts of energy, but very small in comparison to other galaxies. The objects became known as 'quasars'. Zel'dovich speculated that the energy produced by accretion, or the pulling of material from other stars into black holes would explain quasars. American astronomer Edwin Salpeter came to the same conclusion. P. 131.

420 quasicrystal cannot be obtained by a local adding of atoms one at a time. Rather, a non-local quantum mechanical process must be involved; something like an evolving quantum superposition of many different alternative arrangements of attaching atoms. Not one isolated thing happens; many alternative arrangements coexist

421 radio astronomy UNSEEN: Karl Jansky, of Bell Labs, accidentally discovered radio waves emanating from the Milky Way, in about 1930. 33 years later, Bell Labs discovered the Cosmic Microwave Background (radiation) p. 6. The discovery of astronomical radio waves would extend the range of the electromagnetic spectrum from which useful astronomical information could be extracted. Radio astronomy draws attention to objects impossible or difficult to discover optically. The use of low frequencies of radio lend themselves to wave techniques not available in optical astronomy. P. 3. The longer the wavelength, the more wave like are the photons, which can then be manipulated electronically in ways shorter wavelength (more "particle" like) EM radiation cannot. For example, radio interferometry has developed into one of the most powerful tools available in observational astronomy. TPT: Pulsars and quasars were discovered using radio astronomy. The rise of radio astronomy and the elusive nature of radio sources would play a crucial role in the advancement of the General Theory of Relativity. P. 99.

422 radio telescope

423 radionics BCIRCUIT: Developed by George and Marjorie de la Warr in the 1940's. The practice of radionics is illegal in the US. From both a common sense and mechanistic-scientific perspective, it does not do anything "real." In radionics, a vibrational frequency is assigned to almost everything. Radionics electronics devises are not hooked up to anything that logically effects anything else, and in some cases the knobs are not connected to anything. However, various human energy researchers, including Ernest Eeman, Aubrey Westlake, and Peter Lindemann, used radionics machines in their investigation of the biocircuit.

424 Receptor molecules MEMOT: weigh upwards of 50,000 atomic units. They wiggle, shimmy and even hum as they bend and change shape between 2 or 3 favored conformations. They are always found attached floating on the cell's surface, with roots reaching deep inside. They are made up of proteins; tiny amino acids strung together in crumpled chains. P. 22. 70 different kinds of receptors have been identified, ten to one hundred thousand of each type on every cell. A typical neuron may have millions of receptors. The complete chemical structures of these receptors can

be determined. Receptor proteins are sensors. They wait on the cellular membrane for the appropriate chemical key, or ligand, to bind with them. P. 23. Though a key fitting into a lock is the standard image, it might also be described as two sounds striking the same note (resonance) that opens the doorway to the cell. The receptor transmits the message from the ligand deep into the cell's interior, where the state of the cell may be changed dramatically. P. 24.

425 red shift TPT: In 1927, Georges Lemaitre's used de Sitters model to develop calculations that squared with Slipher's results, and predicted a linear relationship between the redshifts and distances of galaxies. Unaware of Alexander Friedman's work, he wrote up the results, but found that his work was completely ignored by relativists, and dismissed by Einstein. p. 39-40. On the other hand, scientists paid attention to Edwin Hubble. He heard about de Sitters model and how Slipher's measurements agreed with the theory. He positioned himself to become the discoverer of the red shift. P. 40-41. Although Lemaitre and Knut Lundmark had been there before, Hubble's discovery of the linear relationship between distance and redshift convinced astronomers that the de Sitter effect might be real. He found that the universe was expanding at a rate of about 500 kilometers per second per megaparsec, known as Hubble's constant; (a megaparsec is about 3 million light years)

426 Reflection Space NPM: An extradimensional space with the property that crystal structures within reflection space are reflected back upon themselves. These hyperspaces and their crystallographic structures have been studied mathematically since the 1930s.

427 REG random event generator or random number generator (RNG)

428 Regge plot BHW: Energy is added to molecules atoms and nuclei in discrete units. A plot of energy vs angular momentum is called a Regge plot or trajectory

429 reincarnation IRRED: Dr. Ian Stevenson pioneered reincarnation research. Cases of Reincarnation Type (CORT): Cases in which a child of 2 or 3 years old begins to exhibit what seem to be memories of the life of a now deceased person. Such children often speak about other parents, or a spouse or children they believe they have, another home, or how they died. In many cases they give sufficient information, such as names of people or places, so the parents are able to locate the person about whose life they seem to be speaking. The child usually stops talking about the other life between the ages of 5 and 8. Research on these cases, which have been found all over the world, has been going on for the last 40 years, and includes several thousand cases. Dr. Ian Stevenson pioneered this line of research. About 200 cases occurred in which the child has a birth mark or birth defect corresponding to a similar mark (usually a fatal wound) on the deceased person. Many CORT cases involve a deceased person who was a total stranger. What therefore is the impetus for the deceased person being born into an unrelated family, or to influence a developing fetus, or for the mother to develop a maternal impression of a stranger? INFINMND: Hunt's "lifelihoods" is another term for reincarnation that de-emphasizes the space-time domain of the physical body, and emphasizes the existence of the soul. P. 203. INFINMND: VERNY in "The Secret Life of the Unborn Child" , and past life regression indicated that the soul generally entered the fetus around the third month. P. 211.

430 Remote Viewing The military remote viewing program was called Grill Flame, Center Line, Sun Streak, and most recently Star Gate. Project Aquarius is alleged to have produced sightings of UFOs over submarines. Civilian RV programs: American Association of Remote Viewers Inc; Psi Tech: Commercial Remote Viewing business. Stephan Schwartz founded the Mobius Group, also directed Project Deep Quest which used RVing under water. outbunder-beacon remote viewing; Remote Map Sensing (map dowsing); coordinate remote viewing

431 renormalization physics: basically ignoring infinities in dealing with theoretical calculations. This absorption of the infinities into the values of physical constants appeared intuitively suspect, but it immediately gave a quantitative explanation of the Lamb shift.

432 repressed emotions INFINMND: create huge gaps in the frequency spectra; “chakra blocks” In these areas the power of the EM vibrations is increased or decreased in body areas associated with emotional trauma.

433 Retrocausation INTENT: Experiment by Helmut Schmidt; may be explained by Wheeler–Feynman absorber theory:

434 Ribosomes MEMOT: Amino acids are strung together to make peptides or proteins in ribosomes, found in every cell. A double strand of DNA in the cell nucleus, unwinds to make a working copy of RNA. The RNA information floats to the ribosome. Every amino acid has a “triplet code” of 3 nucleotides that cause a given amino acid to be transferred and joined to the peptide or protein growing on the ribosome.

435 Robertson Panel UFOS2DAY: Some of the most knowledgeable about the UFO phenomena, including Hynek, were excluded from the Robertson Panel. Robertson wanted to access Battelle’s statistical results, but Battelle refused, saying the study was not completed. The panel concluded the phenomena was not a threat to national security, but did not deny its existence. It also recommended that civilian UFO groups be monitored. The panel planned to plant outlandish UFO claims in magazines to destroy the credibility of the issue. Many observers concluded the Panel’s investigation was not conducted in a scientific manner. The panel didn’t look closely at the data, but discredited it.

436 rolfing A body work therapy developed by Ida rolf, which manipulates rigid body connective tissue, or fascia. Subjects reported numerous emotional experiences, which supports Wilhelm Reich’s belief that memory is stored in body tissues.

437 Roswell deathbed confessions alleged WITOROS: Most of these “confessions” come from family members: Major Edwin Easley; Major Patrick Saunders, Private Francis Cassedy, Sargent Homer Rowlette, Master Sergeant Harry Telesco, PFC James Saine, Sergeant Melvin E. Brown, Meyers Wahnee, Marion Black Magruder, George Compton, General Robert Laundry: Highly decorated, he was the first AF aid to the White House and Truman at the time of the incident. Allegedly verbally reporting to Truman that the “flying saucer situation” would leave no paper trail. Footnote: “President Harry S. Truman....” By Grant Cameron, from 2008 website www.presidentialufo.com. Although he promised the truth to his family, he soon after died. His children noted his cryptic response when asked about the Roswell incident. A sealed statement from First Lt Walter G. Haut, RAAF PIO opened after his death, alleged to have made many appearances at UFO conventions, and founded the International UFO Museum & Research Center His statement supports reports of alien bodies, as well as an egg shaped object, 6 ft high and 15-20 ft long. P. 245 f

438 Roswell incident WITOROS: In July 1947, something crashed in the high desert of eastern New Mexico. A few days later, a press release from Roswell Army Airfield announced that the 509th Bomb Group had “captured” a flying saucer. A few hours later however, a press conference was held at the Eighth Air Force HQ in Fort Worth Texas announced that it was a mistake. The “flying saucer” was nothing more than a weather balloon. 30 years later, in 1978, the intelligence officer of the 509th Bomb Group, Jesse Marcel broke the silence. By the early 1990s, several books were written on this event. In 1994, the Air Force stated that what had crashed was a high flying contraption of multiple weather balloons and radar targets. Then, in 1997, the Air Force offered another explanation for long held rumors and eyewitness accounts of small alien bodies allegedly being recovered from the crash site. Witnesses had seen six foot mannequins used in high altitude parachute drops in New Mexico in the 1950s, or victims of a plane crash in 1956. The 10 year discrepancy was attributed to “time compression” on unwitting witnesses. There appear to have been two debris fields; one reported by Mack Brazel with a small amount of debris, and a second that is at the heart of the issue: an alleged crashed air vehicle and "alien bodies". The very large witness pool, as well as Edgar Mitchell's account of the reactions of Roswell citizens suggests something happened. REVALLEE: On the other hand, if the crash occurred on July

2, and the debris and "bodies" were discovered on July 9, it is highly improbable that any significant biological material would have survived.

439 Roswell military security actions, alleged WITOROS: Former astronaut Edgar Mitchell has stated that Roswell residents told him harsh threats made to parents and families by the military, should the true events of July 1947 be discussed. On July 9, the military searched news offices in Roswell, Albuquerque, and Santa Fe to remove any material contrary to the weather balloon explanation. Mack Brazel's recorded interview was also confiscated. The military also allegedly invaded civilian homes, smashing objects, cutting open and emptying feed bags and food stocks, looking for "souvenirs" they might have taken. 6 witnesses testified that they saw Brazel being escorted through Roswell under military guard, as he went to the town's newspapers and radio stations KGFL and KSWS to personally retract his claims

440 Roswell witness pool, alleged WITOROS No credible witnesses have come forward claiming a balloon event at any crash location. Dozens of credible eye witnesses, military and civilian, have allegedly come forward out of a large witness pool. The witnesses span the entire timeline of alleged events, from discovery and recovery of the UFO and its crew, military threats to Roswell inhabitants, initial transport to RAAF, attempted autopsy; flight to Ft Worth, and flight to Wright Patterson. P. 36-37. 6 witnesses testified that they saw Brazel being escorted through Roswell under military guard, as he went to the town's newspapers and KGFL and KSWS to personally retract his claims. Multiple military and civilian eye witnesses testified about separate locations including debris fields, body site, final impact site. Over 2 dozen witnesses, military and civilian, agree on the unconventional nature of the wreckage. Both have described memory materials as well as fiber optics. A growing number of military and civilian witnesses are alleged to be providing deathbed testimony confessing to direct knowledge about non-human bodies from Roswell, including a survivor of the crash. Multiple military and civilian eye witnesses testified about separate locations including debris fields, body site, final impact site Over 2 dozen witnesses, military and civilian, agree on the unconventional nature of the wreckage. Both military and civilian have described memory materials as well as fiber optics. ROSINCON: Pflock discredits all this.

441 Roswell witnesses named alleged WITOROS: Col William Blanchard, RAAF Commander; Danny Boswell's parents, Roswell ranchers; Mack Brazel, Roswell rancher; Sgt Melvin, Brown RAAF (family); Miriam Bush, RAAF civilian RAAF hospital administrator secretary (family); Pvt Francis Cassidy, RAAF MP (wife); Cpt Sheridan Cavitt, RAAF Head of counter intelligence; Trini Chavez, son of Richards Roswell ranch hand; George Cisneros, Roswell rancher; Bernie Clark, Roswell Deputy Sheriff; Dan Dawyer, Roswell volunteer fireman crew chief; Glenn Dennis, Roswell undertaker; Maj Edwin Easley, RAAF Provost Marshall (daughter); Budd Eppers, Roswell rancher; Gen Arthur Exon, WPAFB Commander; Fawn Fritz: Ranch houses were searched and ransacked.. Wooden floors of livestock sheds were pried loose plank by plank. And underground cold storage fruit cellars were emptied. Glass jars were scattered broken on the ground; Sgt Earl Fulford, RAAF; Arthur Farnsworth Roswell businessman and Sue Farnsworth (daughter); Charles H. Forgas, Deputy Sheriff of Howard County TX (UFOS2DAY); Dr. Lejeune Foster, San Diego authority on human spinal cord structure (daughter); Cpl Edward Harrison, RAAF MP; Lt Walter Haut, RAAF PIO; Nancy Havins, RAAF flight mechanic; Frank Joyce Roswell radio station KGFL announcer; Gen Robert Landry, Air Force aid to President Harry Truman in 1947(family); Cpl Robert Lida, RAAF MP (wife); Richard Loveridge, Boeing crash investigator (aerospace engineer son); Lt Felix Martucci, RAAF flight crew on B-29; John McBoyle, manager KSWS radio in Roswell; Lt Col Marion Magruder, (family); Mil Arthur Osepchook, RAAF flight crew on B-29; Budd Payne, Corona rancher; Truman Pierce, Roswell rancher; Paul Price, Roswell resident; Floyd and Lotetta and son Timothy "Dee" Proctor, Roswell residents; Cpl William Quigley, RAAF specialist; Lee Reeves, Roswell volunteer fireman; Dan Richards, son of Roswell rancher; Sgt Lewis "Bill" Rickett, RAAF; Jack Rodden, Roswell photographer; Frankie Dwyer Rowe, daughter of Dan Dawyer; Sgt Homer Rowlette, RAAF Engineering (family); Pvt James Saine, RAAF Engineering (family); Maj Patrick Saunders, RAAF Adjunct (family); Glaze Sacra, Roswell rancher; Lydia Sleppy; KOAT radio albuquerque: Claims outgoing transmission of Roswell story interrupted by FBI waning. ROSINCON notes such interruption impossible; Mil Robert Slusher, RAAF flight crew on B-29; J C Smith, Roswell fireman;

Charlie Schmid, Roswell motorcycle rider; Robert Scroggins, NM state police officer; Lt Robert Shirkey, RAAF Assistant Operations Officer; Sgt Robert E. Smith, First Air Transport Unit; Clint Sultemeier, Roswell ranchers (Eppers); Sgt Harry Telesco, RAAF Engineering (family); Pvt Lloyd Thompson, RAAF flight crew on B-29; WPAFB pilot Tiffany, (John G. Tiffany son); Cpt Meyers Wahnee, Ft Simmons Colorado security officer (family); Lt Col. Harold Warne, RAAF hospital administrator; Walter Whitmore, Roswell radio station owner; George Wilcox, Chaves County Sheriff and wife (daughter); Sydney Wright, Roswell childhood friend of Dee Proctor;

442 Royal Society FORBIDU: Inspired by the work of Francis Bacon (1561– 1626), the English courtier, and founded by a dozen natural philosophers, including Robert Boyle. In 1660, there seems to have been a struggle behind the scenes between those who followed a more Hermetic/ Rosicrucian model of a learned society and those who shared Bacon's vision. Bacon's version won. For a time, the learned network was used for gathering not just scientific but also political information, and several members were spies, raising the question of whether the Royal Society was created at least in part as a cover for intelligence-gathering. It was only when ^Isaac Newton^ became its president in 1703 that it could bask in his immense prestige.

443 sacred sites FIELD: Roger Nelson took his REG to several native American sacred sites, including Devil's Tower in Wyoming, and Wounded Knee in South Dakota, as well as a guided tour of ancient Egyptian artifacts. He found that the REG output was much greater than that in the PEAR labs, even when he walked around the sites alone. The effect was less when the group visited interesting, but not sacred sites.

444 Santa Fe Institute A group of interdisciplinary scientists in Santa Fe N. M. who developed the field of complexity theory.

445 savant syndrome IRRMND: Of special interest in calculating prodigies is the 'savant syndrome', often associated with infantile autism, in which islands of spectacular ability appear in the midst of generalized mental disability.

446 scalar waves Seems to have multiple definitions: FIELD: According to Laszlo, they are subatomic particles interacting with the ZPF. These are not electromagnetic and do not have direction or spin. They can travel faster than light.

447 scattering Matrix theory CONQUARK: : a theoretical approach to strong interactions

448 schizophrenia HJSTDEL: A clinical diagnosis associated with mental illness, in which the patient has perceptions not perceivable by others, often called hallucinations, which tend to be frequent, intrusive, and distressing. Although seen by mainstream psychiatry as a serious illness, there is evidence that the situation is more complicated than that. Wilson van Dusen, chief psychologist at the Mendocino State Hospital for many years, took the time to hold long dialogs with 20 patients' hallucinations, with the patients being the intermediary. He concluded that he agreed with the patients that their 'others' were not hallucinations but inhabitants of a different order of being. Listening to patients' hallucinations is something not frequently done in mainstream psychiatry.

449 Schumann resonance GLOSSERY: A set of peaks in the ELF portion of the Earth's electromagnetic spectrum. Schumann resonance is due to the space between the surface of the Earth and the conductive ionosphere acting as a waveguide. The limited dimensions of the earth cause this waveguide to act as a resonant cavity for electromagnetic waves in the ELF band. The cavity is naturally excited by energy from lightning strikes. Since the seventh overtone lies at approximately 60 Hz, the cavity is also driven by the North American power grid. The lowest, fundamental frequency (and highest-intensity) mode of the Schumann resonance is at a frequency of approximately 7.83 Hz. Detectable overtones extend upwards into the kilohertz range. The phenomenon is named after physicist Winfried Otto Schumann who predicted it mathematically in 1952, but it was first observed by Nikola Tesla and formed the basis for his scheme

for broadcast power and wireless communications (Tesla 1905). The nominal average frequencies observed are 7.8, with harmonics at 14, 20, 26, 33, 39, and 45 Hz, with slight diurnal variation.

450 scientific experiment as fact CONQUARK: philosophy of science: According to Pickering, there are two well know objections to this view. First, even if it is accepted that the result of experiment is unequivocal fact, it is always possible to invent an unlimited set of theories, each able to explain a given set of facts. Second, the idea that experiment produces unequivocal fact is deeply problematic. Experimental results are fallible in two ways: scientists understanding of any experiment is dependent on theories of how the test apparatus performs, and if those theories change, then so will the data produced. More importantly, experimental results necessarily rest upon incomplete foundations.

451 scientific judgment call CONQUARK: philosophy of science: For example, much effort goes into minimizing "background": physical processes which are uninteresting in themselves, but which can mimic the phenomenon under investigation. A judgment is required that background effects cannot explain the reported signal. [background can also mean processes that do not jive with the theory of interest]

452 scientism FORBIDU: science as an ideology instead of an objective method for analyzing the world. Society often has to take the pronouncement of the scientist on faith, which is exactly how priests rose to power, by claiming an exclusive insight into laws beyond the reach of ordinary folk. p. 2.

453 Scientology GLOSSERY: An outgrowth of Dianetics, accepts reincarnation, and seeks to rise human consciousness to a higher level. Engrams from past lives must also be erased, to achieve a level of "thetan". As of the early years of the 21st century, Scientology has gotten some bad reviews

454 SDI Strategic Defense Initiative: "Star wars" program

455 secret materials testing UFOS2DAY: around 1947: Vanadium Corporation of America account (now Shield Alloy) Bridgeport PA 1940s + metal analysis; Timken Roller Bearing Akron OH account Autumn 1947 blast furnace test; North American Aviation Columbus OH account.

456 sensory deprivation sensory stimulation eliminated, as per John Lilly's sensory deprivation tanks.

457 SETI "Search for Extraterrestrial Intelligence" Ohio State University's SETI program was grassroots; the world's first continuous SETI program. John Kraus built a large radio scope, dubbed "Big Ear" in Delaware Ohio. It was a passive scope; stationary, depending on earth's rotation. One day in August 1977, Professor Jerry Ehrman was flipping through printouts and found the now famous "Wow!" signal. A 72 second signal was of a kind that should not have been natural. Ehrman wrote "Wow!" on the printout. Big Ear never detected another "Wow!" signal. Frank Drake, Phillip Morrison, and John Billingham wanted a NASA SETI program, which they got in 1978, but it was cancelled by congress in 1993.

458 SETI Institute WAITFC: Headquartered at Mountain View California, it was incorporated in 1984 by Jill Tartar and Thomas Pierson. Unlike the Planetary Society, it has focused on alien life. It originally functioned to help NASA SETI, but when NASA SETI was cancelled by Congress, the SETI institute became the SETI player, receiving NASA's unwanted search equipment. P 144 f.

459 SETI League WAITFC: he SETI League recruits amateur astronomers willing to develop technology and software to search the sky with backyard radio telescopes, typically 3 to 5 meter dishes, at their own expense. P. 150

460 SETI Optical WAITFC: Initially SETI was conducted using radio telescopes. Only at the end of the 20th century were optical scopes finally used.

- 461 shaman TSN: shaman experience of UFO: as physical or mystical; Call to Shaman: alien implants; In Australia, the calling of the shaman is announced by a god or spirit inserting (or implanting) a magic stone or crystal into the individual's body. COSSERE: Shaman may experience hallucinations reflecting verifiable information after the Ayahuasca ritual.
- 462 Sheep and Goats PHENOM: believers and skeptics; FIELD Braud had noticed that believers have the experience, while non-believers do not.
- 463 Siddhis FIELD: The Vedas speak of siddhis as psychic events during meditation
- 464 Silva Mind Control
- 465 singularity a point at which some value becomes infinite
- 466 Skunkworks PHENOM: Lockheed
- 467 SLAC Stanford Linear Accelerator Center
- 468 SMPP Standard Model of Particle Physics eightfold way
- 469 sonoluminescence GLOSSERY: A diffuse uniformly applied sound wave propagating through water can be observed to spontaneously focus its energy by over a factor of one trillion to generate a very short flash of ultraviolet light. A similar effect can be observed in the flow of water through a converging pipe. At flows which achieve velocity variations of about a meter/second bubbles form in the constriction and then emit picosecond bursts of ultraviolet light as they collapse downstream. Sonoluminescence has been called a spectacular example of Spontaneous Energy Focusing in Fluids and Solids. FIELD: the emission of short bursts of light from imploding bubbles in a liquid when excited by sound.
- 470 soul as a UFO TSN:
- 471 Space Exploration Outreach Program (SEOP): SAPRO: in 1989, President G H W Bush proposed the US undertake an ambitious program of space exploration. V P Dan Quayle, chairman of the National Space Council, requested that NASA "cast a net widely to find the most innovative ideas in the country" for carrying out this request. Thus was born the SEOP. NASA requested public input on new technology ideas which might help this effort. LaViolette was one of about 45,300 individuals receiving a flyer in 1990, describing SEOP and inviting input. P. 378. All suggestions were to be sent to the RAND corporation. LaViolette submitted the idea of electrogravitic propulsion technology. The final government document summarizing the result of the outreach program was titled "America at the Threshold", made public in 1991. This had the appearance of a NASA public relations document, with little scientific detail. No mention of the idea of electrogravitic propulsion was mentioned. The report stated that of the submissions that made it through the screening process, none contained any "any new scientific laws or principles, or wholly new areas of technology. It also stated that most of the submissions had proposed concepts or ideas that are currently being considered by NASA. LaViolette found that in 1991 the SEOP project had been disbanded and it's members scattered to the winds. He was stonewalled when he attempted to get more information on the SEOP project. P. 382 f. Through a FOIA request he learned that several other submissions also dealt with nonconventional propulsion technologies and were also not mentioned in the final report. Several of the entries would seem to have been well worth investigating, including the Searle levity disc, and gyroscopic inertial drive. LaViolette suggested that the censoring may have been to prevent NASA from considering technologies that were already being worked on in defense sponsored black projects. It became clear to LaViolette that SEOP had been planned to be a one way information gathering intelligence operation. P. 388.

- 472 Space Shuttle Columbia SAPRO: On Feb 1, 2003, the Columbia space shuttle crashed to earth in flames due to damage of one of the wing's thermal protection tiles. Had Brown's electrogravitics technology been implemented, this disaster could have been avoided. Despite the SEOP submissions 13 years earlier, and LaViolette's personal communication to NASA personnel, the new technology was not implemented and people died. P. 391-392.
- 473 space telescope Kepler, Hubble, James Webb
- 474 space weather INTENT: Any change in solar system, especially solar wind, and sunspot activity, can effect the earth's GMF. NOAA tracks these space weather patterns. storms of maximum severity ("G5") can disrupt electrical power, pipe line flow, and communications systems. Illness on earth appears to parallel geomagnetic "storms", especially for heart and brain and psychiatric disorders. Healthiest heart rate is the one with greatest variation (max HRV), which corresponds to least amount of solar activity.
- 475 spin glass model statistical dynamics model using the statistical mechanics language of phase transitions, like critical points and attractors
- 476 spiricom SPOOK: In the 1980's, an electronics buff Willaim O'Neil, developed Spiricom, a devise for spirit communication. He claimed to have lengthy two way conversations with a deceased NASA physicist named George Mueller. O'Neil and George Meek published hundreds of pages of transcripts of alleged conversations. Meek and O'Neil had no apparent plans to profit from this project; others published the books, and they gave away the blueprints for Spiricom at a press conference, encouraging others to try to replicate what they had done. No one succeeded. P.207.
- 477 Spooky action at a distance HHSP: Einstein assumed that both particles A and B had definite values for position and momentum at all times, and it was a given that A could not interact with B. Quantum theory says that values of position and momentum of two particles only emerge during the act of measurement, and any attempt to measure the values of A would instantaneously change the properties of B. According to Einstein, this is spooky action
- 478 SQUID Superconducting Quantum Interference Device. HANDSOL: SQUID does not touch the body as it measures the magnetic field around the body. P. 20
- 479 SRI Stanford Research Institute
- 480 Statistics Gaussian Distribution
- 481 steady state universe TPT: concept popularized by Fred Hoyle but dismissed by mainstream science. Martin Rees selected 35 quasars with measurable red shift, and divided them into 3 groups. The 3 group consisted of quasars with low, medium, and high redshifts, corresponding to close, medium, and far from earth. Rees found almost no quasars in the close to group, and almost all of them in the farthest group. Ie, the number of quasars changed among the three groups, which one would not expect in the SS universe. P. 126. Thus the theory of a SS universe was dealt a blow.
- 482 strange attractor A phenomena seen when complex data are plotted in the phase plane. The plotted data is not random but shows an overall coherence. In 1963, Ed Lorentz, a meteorologist, plotted 40 years of weather data to reveal the Lorentz attractor. INFINMND: Using three seconds of raw data from Valerie Hunt's HEF experiments, Allen Garfinkle, an established fractal mathematician obtained the Hunt Attractor; a complex ovoid shape. Attractors have been found for brain wave and heart data, but these require hours, or even days of data. 3 seconds of heart or brain data generated a straight line, meaning frequency did not vary. This complex organization of the HEF means that it may be manipulated by adding energy, to refine and encourage coherency in all tissues and biological systems. This approach could produce results more rapidly and dramatically than could any other known medical, psychiatric, or educational approach.

483 STRelativity Special Theory of Relativity: GLOSSERY: : Einstein published this Special theory in 1905. The word special here means that we restrict ourselves to observers in uniform relative motion. As material objects approach the speed of light, they become more massive and shorter. Traveling at the speed of light, a material object would have infinite mass and zero length.

484 stress MEMOT: The NIH has found a link between depression and traumas experienced in early childhood. Adrenalin is what causes the fight or flight response , which is a natural unconscious reaction to threats, real or perceived. The hypothalamus releases cortical releasing factor (CRF) which when it hits the pituitary, releases adrenal cortico tropin hormone. When ACTH hits the adrenal glands, in addition to adrenaline it produces corticosterone, necessary for healing and damage control during injury. Stress increases with increased steroid production. Depressed people are in a chronic state of ACTH production because of a disrupted feedback loop that fails to signal when there are sufficient levels of steroid in the blood. [or there is a constant state of threat?]

485 String theory String theory began as a search for a unified theory capable of reconciling quantum field theory with general relativity, and has resulted in a major shift in theoretical and experimental physics. FEYNBOW: In 1967, Murray Gell-Mann was lecturing on the striking regularities in data pertaining to the collisions of protons and neutrons. An Italian grad student, Gabriele Veneziano, became intrigued, and in a year he found a simple math function that would describe the regularities. The why it worked was presented in 1970 in the work of Leonard Susskind and Yoichiro Nambu. They found that Veneziano's mathematical function would arise from the underlying theory if you modeled the protons and neutrons not as points, but as tiny vibrating strings. P 99. In 1984, John Schwarz and Michael Green resolved the last major inconsistency in string theory. This did not make the theory any easier to solve, but it convinced many leading physicists- especially Edward Witten- that the theory had too many miraculous properties to ignore. String theory then jumped from laughingstock to hottest thing in physics P. 169. BHW: The most important Fundamental string is the graviton, the quanta of the gravitational field. Hadronic string theory: BHW: Hadrons include protons, neutrons, mesons; string like objects are called QCD strings. FORBIDU: Formulated in the mid 1980s, it was recognized as the best hope for uniting quantum and relativity theories. As it failed to explain certain things, variations were suggested to account for them, and so every attempted fix ended with another variant of the basic theory. One of the most withering attacks on string theory comes from the 2006 book "The Trouble With Physics" by Lee Smolin.

486 subatomic particles proton neutron neutrino quark hadron lepton pion meson gluon baryon tachyon Higgs

487 subatomic roperties Spin, isospin, parity, strangeness, charm

488 subquantum kinetics SAPRO:Offers an explanation of gravity much different than Einstein's General Relativity. While GTR proposes that masses exert an attractive gravitational force on other bodies by warping the space-time fabric around themselves, subquantum kinetics proposes that masses have no such effect on the geometry of space and time. It assumes that space is Euclidian and conforms to Euclidian geometry. It predicts that a mass creates a classical gravity potential field and that the gradient in such a field exerts a force on a remote body by affecting how that bodies subatomic particles regenerate their physical form. Chapt 4.. According to GTR, masses always attract but never repel each other. Although Einstein did introduce a matter repelling effect called the cosmological constant, this was an ad hoc correction factor he had to add so his field equations would not predict a universe that was spontaneously contracting due to its own self gravity. Einstein failed to expand his GTR to include both electromagnetism and gravity, but was unable to predict any connection between charge polarity and gravitational field polarity. SQK however, predicts a gravitational field has two polarities. It predicts that positively charged particles such as protons would generate gravity wells, while negatively charged particles such as electrons would form gravity hills. When protons and electrons combine to form electrically neutral atons, the gravitational effect of the protons and electrons cancels out for the most part. But the proton's gravity well is theorized to marginally exceed the electrons' hills, producing a small residual matter attracting well that we call gravity. SQK predicts that a matter repelling gravity potential hill would form

on the negatively charged side of a mass, and a matter attracting potential hill would form on the positively charged side of a mass. This is easy to demo with capacitors when they are charged, which have a positively and negatively charged side. The result would be a net force towards the gravitational well. This is the electrogravitic force that T.T. Brown observed. P. 11-13.

489 subtle energy GLOSSERY: Alleged life energies; the human energetic anatomy, the vital force that makes us alive, the energetic dynamics of our relationships, the energies of the earth; known variously as Chi, Prana, Orgone, etc., but which have been so far undetected by instrumentation. Dr. William Tiller associates the magnetic vector potential to the "subtle domain" and says that human consciousness can generate a physical space "conditioned" by subtle energy, that this subtle energy is related to the magnetic vector potential of classical electrodynamics, and that this subtle energy may result in psi phenomena. His books on this subject include "Some Science Adventures With Real Magic", which summarizes several previous books. HANDSOL: Many esoteric teachings, the Hindu Vedic texts, the Rosicrucians, Native American Medicine people, Tibetan and Indian Buddhists, Japanese Zen Buddhists, Madame Blavatsky, and Rudolph Steiner describe the Human Energy Field in detail. P. 29-30. Paracelsus called energy emanating from the human body "Illiaster".; Bioplasma, and Direct Current Control System. BCIRCUIT: orgone energy, odyle energy.

490 Suitcase SETI see Paul Horowitz

491 superconductivity Bose Einstein Condensate, PHILSPEAT: superconductivity and superfluidity are quantum effects in which large numbers of individual atoms are coordinated by a phenomena which is expressed mathamatically by a "wave function".

492 superradiance GLOSSERY: Jubi et al have proposed that the quantum dynamical system of water molecules and the quantized EM field confined within the hollow microtubule core can manifest a specific collective effect called superradiance, by which the microtubule can transform any incoherent thermal and disordered molecular, atomic, or EM energy into coherent photons inside the microtubules. INTENT: Popp et al discovered this property, similar to the Bose Einstein condensate, in biophotons: they are coherent; all same frequency and in phase; p. 31. FIELD: a process whereby water molecules play a role in organizing discordant energy into coherent photons

493 Swann Geller effect PHENOM: Puthoff wrote up his findings from the Varian Hall incident. Several weeks later the CIA approached him and with concerns over Soviet ESP experiments, and arranged for more testing of Swann and a pilot program headed by Puthoff. Swann successfully passed a spontaneously conceived test, in which there was no possibility of fraud. In 1972, the CIA awarded an 8 month research contract to SRI. Geller would also be brought into the program and tested, on behalf of the CIA. The results, called the SwannGeller effect, would set the stage for more than 20 years of classified research into ESP.

494 Swann SRI Varian physics hall incident: PHENOM: In the 1970s, Puthoff used the SQUID buried in the Varian Hall physics building at Stanford to test Ingo Swann's remote viewing abilities. Swann was being asked to "poke around" with a target he could neither see, nor even know exactly where it was underground. A strip chart recorder was in the room, which recorded the magnetometer's activity. Swann asked for a piece of paper. He drew the magnetometer as he saw it in his mind. "Is this the Josephson Junction, he asked, pointing to his drawing. If so I can see it quite well." At that instant, the pen on the strip chart gave a small jerk. "All eyes went to the machine" Puthoff said. Then the pen lifted high above its previous position. Swann heard someone mumble "Jesus Christ". "Can you do that again" Puthoff asked. Swann concentrated and the pen moved again. This led Puthoff to only one conclusion. Swann had perturbed the magnetometer by some not understood means. Puthoff asked Drs Lee and Hebard to sign the changes recorded by the strip chart, and they did.

- 495 Symbiosis of theory and experiment CONQUARK: Experimental techniques are adapted which allow discovery of the required fact or particle which is otherwise unobservable.
- 496 symmetry spontaneous symmetry breaking; super symmetry: GLOSSERY: A theoretical structure that, in pairing both fermions and bosons with theoretical "superpartners", allows for the synthesis of the standard model's three distinct forces into one "supergroup".
- 497 synchordic collapse TBF: event in the brain, that triggers a specific neural activity. Nanopoulos theorizes that every conscious event is associated with a synchordic collapse
- 498 Synchronicity Jung's concept of acausal faster than light transmission of information, including connections between psychic and physical events- which he relates to the activation of archetypes within the collective unconscious .
- 499 synthetic telepathy PHENOM: A microwave input signal allowed the brain to receive a message that it perceived to be a voice.
- 500 tachyon GLOSSERY: A putative class of particles which is alleged to travel faster than the speed of light. Tachyons were first proposed by physicist Arnold Sommerfeld, and named by Gerald Feinberg. The word tachyon derives from the Greek (tachus), meaning "speedy." Tachyons have the strange property that, when they lose energy, they gain speed. Consequently, when tachyons gain energy, they slow down. The slowest speed possible for tachyons is the speed of light. Tachyons appear to violate causality, since they could be sent to the past under the assumption that the principle of special relativity is a true law of nature, thus generating a real unavoidable time paradox (Maiorino and Rodrigues 1999). Therefore, it seems unavoidable that if tachyons exist, the principle of special relativity must be false, and there exists a unique time order for all observers in the universe independent of their state of motion. Tachyons can be assigned properties of normal matter such as spin, as well as an antiparticle (the antitachyon). And amazingly, modern presentations of tachyon theory actually allow tachyons to have real mass (Recami 1996). It has been proposed that tachyons could be produced from high-energy particle collisions, and tachyon searches have been undertaken in cosmic rays. Cosmic rays hit the Earth's atmosphere with high energy (some of them with speed almost 99.99% of the speed of light) making several collisions with the molecules in the atmosphere. The particles made by this collision interact with the air, creating even more particles in a phenomenon known as a cosmic ray shower.
- 501 telepathy BCIRCUIT: Ernest Eeman conducted numerous telepathy tests with receivers in and out of a biocircuit He ultimately concluded that the relaxation circuit fostered telepathic reception. P. 130.
- 502 telescope All telescopes work by getting information, or energy, from electromagnetic waves. Optical telescopes get information from the visible "light" portion of the EM spectrum. Radio telescopes get information from the radio wave portion of the EM spectrum. Cosmic Ray telescopes get information from the cosmic ray portion of the EM spectrum.
- 503 temporal lobes FOG: Once the connection between mystical experience and temporal lobe epilepsy was made, many neurologists accepted the idea that increased temporal lobe activity is central to spiritual experience
- 504 Theistic Evolution LOG: Collins supports this concept, which conforms to modern scientific theory, including the fact that the universe appears to be precisely tuned for life and is irreducibly complex. To him, human evolution, including spiritual, is part of that evolutionary process.
- 505 Theories of consciousness microtubule theory: Penrose, Hameroff; wave particle theory: acts as particle or wave: Jahn and Dunne;

- 506 Thermodynamics first law: conservation of energy; second law: Entropy
- 507 thought forms TSN: quality of an experience as both real and not real
- 508 Time anomaly FIELD: lost or missing time; precognition; retrocausation. If consciousness is operating at the quantum frequency level, it would also operate beyond space and time, which means we theoretically have access to information past and future. P. 175 HANDSOL: Australian aborigines have two kinds of time; the passing time and the Great Time. What occurs in Great Time has sequence but cannot be dated. P. 23. HANDSOL: Lawrence Le Shan has shown that Great Time is similar to the Time clairvoyants traverse. Time Jumps: GHAI: aircraft missing time GHAI p. 224; Kwajalein Island Time Center US naval Observatory Wash DC: The first recorded shift in Time was measured during the period from 23 nov 1973 to 10 Jan 1974. The Cesium time generators on Kwajalein Island in the Pacific Ocean, the most precise timing system in the world, recorded the shift. Kwajalein compares its output with the US naval Observatory in Wash DC., with a millisecond correlation. Suddenly, the Kwajalein time generators lagged the USNO by .3 microsecond. The first lag lasted a month. The lags continued sporadically. p. 239f
- 509 trance TSN: the myths of society and self which we internalize
- 510 trauma REALDEN: picked up by immune system
- 511 treatment of AIDS virus MEMOT: The AIDS virus enters the T4 receptor to infect cells. P. 199 The human immunodeficiency virus (HIV) causes AIDS. P. 200. Pert's data showed that the T4 receptor was a neuropeptide receptor. The body's natural peptide ligand for the T4 receptor could provide a simple non-toxic way to stop the HIV from entering the cell; like naloxone for occupying the opiate receptors. P. 203. They found that one peptide displaced HIV protein in T4 receptors, which they called Peptide T. Eventually they found the endogenous ligand for which the T4 receptors are intended to bond with: VIP: vasoactiveintestinal peptide. NIH and the Cancer Institute however, had their own candidate for an AIDS treatment: the highly toxic ATZ, which worked by terminating virus reproduction, but also destroyed healthy cells, especially in the nervous system. In 1987 Pert resigned from NIH, to try to carry Peptide T forward. P. 216 f. Pert and Ruff theorized that it was the blockage of the body's VIP receptors by the HIV protein gp120 that caused AIDS symptoms, not the infection of the cell by the HIV virus. P. 228. Protease inhibitors have since been found to prolong the lives of AIDS patients that can tolerate the Protease chemical soup required, but even here there are difficulties. About 25% of long term survivors die from body wasting (weight loss) even though no detectable virus is present.
- 512 Twin serpents of DNA COSSER: twin serpents experienced by by anthropologists Michael Harner, Jeremy Narby and others under the influence of Ayahuasca (DMT) were interpreted as the DNA molecule. Narby found that the mythological theme of twin creator beings of celestial origin was extremely common in South America, and indeed throughout the world. Narby wondered if these twins could represent DNA. He found that the shape of the double helix of DNA was most often described as a ladder, or a twisted rope ladder, or a spiral staircase. (Where did this come from? DNA is a recent discovery.) Interestingly, the shamans' ladders were present in shamanic themes around the world, according to Mircea Eliade. Narby notes that he should check whether DNA emits sound or not, but the answer could be YES; phonons, which are "sound molecules", are associated with DNA. Narby's investigation led him to the following hypothesis: In their visions, shamans take their consciousness down to the molecular level and gain access to information related to DNA, which they call "animate essences" or "spirits." He knew that DNA emits biophotons in the frequency range of visible light, and that although these emissions are coherent, they are very weak. Researchers compare the phenomenon to an "ultra-weak laser". DNA's highly coherent photon emission could account for the luminescence of hallucinatory images, as well as their three-dimensional, or holographic, aspect. Interestingly, the Caduceus, the ancient symbol for medicine and healing, also includes two intertwined serpents.
- 513 UCTs uncorrelated targets: Military term for UFOs

- 514 UFO abductions Screen memories are produced to screen disturbing memories. ABDUCTEE SELF HELP GROUPS
- 515 UFO cults INVCOL: eg Spanish UMMO as of 1975. The Book of Mormon, first published in 1830, is similar in many ways to the OAH SPE bible or the BOOK OF URANTIA, two accounts of early history inspired by "divine intelligence".
- 516 UFO disinformation agents UFOS2DAY: Robert M Collins "condor" (but author spends pages of this book describing what he says)
- 517 UFO Hilltop model INVCOL: Vallee has divided UFO phenomena into a spectrum of 7 categories, from minimal strangeness to maximal strangeness. Minimal strangeness is just an unknown light. Maximal strangeness is an abduction. For maximal and minimal strangeness, the probability of report is smallest.; minimal strangeness may be reported to anyone; midrange strangeness is reported to authorities; maximal strangeness event, including reality gap, may be reported to no one, or even not reported to the conscious mind
- 518 UFO military studies Project Sign:AAGEN: Some project officers believed some of the sightings were important and Drafted "Estimate of the Situation". Project Grudge: AAGEN: Gen Hoyt Vandenberg orders Project Sign "Estimate of the Situation" destroyed and all incidents be debunked by Project Grudge. Project Bluebook: AAGEN: third and final visible project: Bluebook continued as the visible response of the government. APRO came to suspect that Bluebook was a cover up. P 203. UFOS2DAY: Bluebook was a PR front to satisfy the public that something was being done. Ruppelt arranged one or more contracts with Battelle, including BB Special Report no. 14. UFOS2DAY: Dolan notes that 4 military studies concluded ufos were interplanetary, including the 1948 Project Sign "Estimate of the Situation", and a 1952 Project Blue Book engineering study
- 519 UFO Psychic aspects space time distortions, devices such as UFOs which appear or fade away, telepathy.
- 520 UFO security breaches OUTTHERE: Security Option 3 Alerts at SAC bases Loring AFB, Limestone Maine; Malstrom AFB in Great Falls MT, Minot AFB in North Dakota, fireballs near Los Alamos, NM nuclear research facilities. GHAI: Some of the most remarkable stories of time twists and the appearance of ghosts are classified because of happening at highly classified locations, such as where nuclear weapons are stored. There is a sickness (perhaps it is sanity) which pervades such facilities. Every so often people working on or near these devices will just walk away from their jobs. No threat of court martial or punishment can touch them. A highly regarded security guard at a British weapons storage facility "saw" Queen Boadicea in her chariott, and her men at arms racing through the highly secure area. Queen Boadicea was an ancient Briton queen who tangled with the Romans when they invaded England. The guard was carted off to a mental institution. A week later, a corporal of the security force saw the same thing, but retained control of himself. He stuck to his story and refused to ever return to the weapons storage complex. This event has parallels elsewhere. P. 230 f
- 521 UFO USAF Regulaions OUTTHERE: AF Intelligence report No. 100-203-79; AF Regulation 200-2; JANAP 146 CIRVIS: Joint Army-Navy-Air Force Publication (JANAP) 146 directed pilots to keep ufo reports secret. Communication Instructions for Reporting Vital Intelligence Sightings (CIRVIS). UFOS2DAY: Air Force regulation 200-2 ordered officers to not publicly discuss UFO incidents unless they had been solved. Unsolved cases were ordered classified.
- 522 UFO Working Group Claim of the existence of this group may be disinformation OUTTHERE
- 523 UFOs astronauts Buzz Aldrin, Ed Mitchell, Gordon Cooper and Donald Kent (Deke) Slayton UFOS2DAY: have spoken out about UFO phenomena. Gordon witnessed UFO activity in Germany, and is alleged to have been "silenced" Aldrin is alleged to have seen a UFO during an Apollo 11 flight.

524 UFOs classics Mt Rainier sighting Kenneth Arnold 1947, Maury Island incident 1947, Roswell incident July 4 1947, Thomas Mantell Case: Jan 7, 1948, KY; Lubbock Lights Aug 25-27 1951, Washington DC incident of July 19, 1952, Zamora incident April 24 1964, Socorro N M., Bentwater case; Pascagoula incident

525 unobserved particles: quark etc CONQUARK: In the scientist's account, they do not appear as active agents; they are represented as passive observers. The facts of natural reality are revealed thru experiment. The experimenter's duty is simply to report what he sees. However, non-observables are the conceptualization or construct of a natural phenomena. However, scientists typically claim these constructs are "real" and then use these constructs to legitimize their judgments. This follows from the symbiosis of theoretical and experimental practice: Experimental techniques are adapted which allow discovery of the required fact or particle

526 Vallee control system INVCOL: Vallee proposUFO encounters function as a kind of control system to help humans evolve

527 van der Waals force forces between atoms or molecules due to electrical charge imbalance

528 Varieties of Religious Experience IRRMND: Book by William James, which remains the starting point for a discussion of mystical experience. Even when acknowledging that such experiences are often life transforming, the standard approaches, beginning with this book, treat them as purely subjective events having validity only for those experiencing them, thus denying their objective significance and the testability of the associated truth claims. However, much literature testifies to genius level creativity and many other unusual empirical phenomena.

529 Vector Potential GLOSSARY: is a fundamental concept in vector analysis and physics. Given a vector field V , its vector potential E is a vector field such that $V = \text{del} \times E$. Michael Faraday found that turning off the current in an electromagnet also created an induced current in the secondary circuit, equal and opposite to the original current. Faraday attributed this unexpected current to what he called the "electrotonic" state of particles in the wire. In his Treatise on Electricity and Magnetism, James Clerk Maxwell found a mathematical expression that matched exactly Faraday's concept of the electrotonic state. He developed a physical interpretation: the angular momentum of a localized electromagnetic field. Like a flywheel, the localized field would store energy, reacting with a counterforce to resist any change in angular momentum. This takes the form of an electromotive force which could drive a current. Maxwell termed Faraday's electrotonic state 'magnetic vector potential'. This term appeared in Maxwell's equations, but was eliminated by Heinrich Hertz and Oliver Heaviside, but has a physical significance in quantum mechanics. It has been associated with subtle energies.

530 virtual reality Normally associated with hardware, as in goggles and attachments to the limbs, which in conjunction with software, creates a simulated experience.

531 water The unique qualities of water have long been acknowledged. A 1992 article in Discover Magazine notes that water is too complicated to be discussed in books on simple liquids. Unlike other liquids, it flows faster under high pressure than under low pressure, and its solid form is lighter than its liquid form. While other liquids are generally aloof, water's oxygen and hydrogen atoms like to form bonds with practically anything. It is a compound formed from two gases, yet is a liquid at normal temperatures and pressures. Water is the only substance that can exist in all three states at the same time: solid, liquid, gas; it has the highest surface tension of all liquids; is a powerful solvent, and can defy gravity in capillary action. See more: Mysterious Water.doc

532 wave Energy that is propagated in a medium from a source. This energy has a wavelength, a frequency, and amplitude. The wavelength is the reciprocal of frequency ($1/\text{frequency}$). Waves can be propagated in air, producing sound waves; in water producing pressure waves; in air water interface producing water surface waves. The medium for

electromagnetic waves was once thought to be something called the ether, but can travel in the vacuum of interstellar space.

533 wave equation Schrodinger wave equation; wave function

534 wave particle duality DeBroglie established that all subatomic particles, as well as atoms, molecules, and macromolecules, can be described by either particle or wave equations.

535 Weak Neutral current CONQUARK:

536 weather modification REALDE: Trevor James Constable: had done weather modification research using orgone energy, and filed documents prior to undertaking major orgone weather modification projects. There are international treaties regarding how weather modification can be employed. The topic of weather modification was mentioned in a USAF document projecting technology for 2025.

537 whales telepathic communication

538 WIThomas Theorem social psychology theorem: what is believed to be true becomes true in its consequences

539 wormholes FIELD

540 wow signal on Aug 15 1997, Ohio State University Big Ear radio telescope detected an anomalous signal that was never repeated

541 Wright Patterson AFB WPAFB: UFOS2DAY: By the end of 1947, Wright field had processed 1500 tons of captured documents, adding 100,000 new technical terms to the English language. Advances were made in many disciplines and benefited many manufactures.

542 xray fluorescence 37THP: xray fluorescence: Testing: a test purportedly done on a fragment of alleged material from the Roswell crash.

543 Zeeman Effect GLOSSERY: The splitting of a spectral line into several components in the presence of a static magnetic field. It is analogous to the Stark effect, the splitting of a spectral line into several components in the presence of an electric field. The Zeeman effect is very important in applications such as nuclear magnetic resonance spectroscopy, electron spin resonance spectroscopy, magnetic resonance imaging (MRI) and Mössbauer spectroscopy. It may also be utilized to improve accuracy in Atomic absorption spectroscopy. When the spectral lines are absorption lines, the effect is called Inverse Zeeman effect. The Zeeman effect is named after the Dutch physicist Pieter Zeeman.

544 zero mass problem CONQUARK

545 ZPF FIELD: In physics, quantum vacuum fluctuations: residual energy of virtual particles at a temperature of absolute zero, theoretically a huge quantity. Called zero point field because at absolute zero, there is still movement of these virtual particles. ZPF Theory of Inertia: Puthoff, Rueda, and Haisch Find Newton's law $f=ma$ can be derived from electrodynamics when the ZPF is included. (note strong objections by James F Woodward in his "Origin of inertia" Fullerton.edu 1998). They propose that matter is not a fundamental property of physics. Mass is not "equivalent" to energy; mass IS energy.