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I RESOLUTELY SUPPORT SCIENTIFIC RESEARCH IN ESP

BY: Nie Chunrong

A CRITICISM OF "I RESOLUTELY OPPOSE THE PROPAGANDA OF THE COUNTER
SCIENTIFIC SO-CALLED "ESP"

I saw in the Hong Kong News section of "DAGONGBAO" of 09 January 1989 a report of an article by Yu Guangyuan entitled "I Resolutely Oppose the Propaganda of the Counter Scientific So-called "ESP" (hereafter referred to as Yu's article). Yu wrote in his article that "I think someday I will write another batch of articles and have another battle." I knew a long time ago that he would do something like this someday, because in 1986 in a book entitled "A Criticism of the So-called "ESP" (hereafter referred to as Yu's book" published by the Intelligence Press he wrote in the forward: "In a country which takes the scientific truth of Marxism as the theoretical basis of our endeavors, such an unabashed propagandizing of a tide of anti-Marxism is more than I as a Marxist can bear." This was a foreboding that he would launch another attack. It now appears that the day has already come, and he has begun to launch another attack on research on ESP.

I.

Please take note that the key point of Yu's article is opposition to the propaganda of ESP. Back when he held sway in China's natural sciences and social sciences, under his "banner" of opposition to the propaganda of ESP, he called propaganda of ESP - referring to demonstrations, reports, news articles, experiments, papers and published reports - "in direct opposition to the basic principles of materialism (Yu's book page 258). This large hat has not yet been removed from the "clowns" of this forbidden area. This is the truth of what Yu's said in his article: "There is a very strange phenomenon going on in China, the question of "ESP" seems to be a forbidden zone". And those self proclaimed "defenders" in "defense" of Marxism have used the forces in opposition to ESP to conduct activities against it. In November of 1986 he also wrote and published his book "A Criticism of So-called ESP". Is he not trying again to "write another batch of articles to criticize" ESP, the objective existence of which has been demonstrated by scientific experiments? This is the portrayal of "full of lies and holding truth prisoner" of Yu's article.

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In the entire article, I could not find a single reason which could demonstrate that ESP was a counter science. However, the headline of Yu's article gave people the impression that ESP was "Counter Science". I also read Yu's book from cover to cover, his reasoning was nothing more than using counter scientific methods of "idealism" "reasoning" to deny the objective existence of ESP. Actually, does ESP objectively exist? Based on the materialist principle that "practice is the only standard for testing for truth", the only way to demonstrate whether or not it actually exists is to use scientific practical testing. The author is not about to deny that "practice is the only standard for testing for proof", so when he was in Hong Kong he came up with an "idea": "Since there are differing views on this, and since the philosophic views cannot be resolved in a short time, we should agree on a scientific procedure to formally test in public." According to what I know, the author in the past has used another principle, which is that "reasoning" is "a more reliable" criterion for testing for truth. I have a basis for saying this. Once at a speech by the author, someone asked him: "Is whether or not ESP objectively exists a question of practice or a question of theory. The author stated decisively, "this is a theoretical question". This means that the determination of whether or not ESP objectively exists is not to be done by relying on the practice of experimental science, but is to rely on the "reasoning" of theoretical science. He refused to take part in the joint testing in Beijing from April to July of 1982 by organized by the China Somatic Science Research Committee (preparatory) to be conducted by scientific workers of concerned units from some of the provinces and cities.

I do not oppose scientific reasoning or inference. What I do oppose is counter scientific "idealism" "reasoning". The author has raised the example of physicists using the laws of thermodynamics to prove that there can never be a perpetual motion machine in an attempt to secure a "foundation" for his counter scientific "idealism" "reasoning". It is true that the laws of thermodynamics deny the possibility of a perpetual motion machine. However, this cannot become the grounds for the authors argument. This is because a perpetual motion machine has never been successful in an experiment. Furthermore, the laws of thermodynamics can prove that a perpetual motion is impossible. ESP is not the same. China has thousands of people with ESP and hundreds of organizations conducting research in ESP. In the past ten years they have conducted tens of thousands of scientific experiments, demonstrating the objective existence of ESP. In reading the author's book and article in opposition to ESP, I have never seen any scientific reasoning such as the laws of thermodynamics in the author's arguments. Therefore, his attempts will not succeed. Since he cannot present any scientific reason with a factual basis to deny the objective existence of ESP, then based on the principle that "practice is the only criterion for truth", he should admit that scientific practice is the only way to test for the objective existence of ESP. Now the author is in Hong Kong with some new "ideas", suggesting the organization of scientific experiment to test it. I welcome this.

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What sort of scientific practical experiments has this author actually done in the past? Has he taken part in or watched any ESP demonstrations and scientific experiments? Has he taken part in or listened to scientific workers' designs of ESP experiments or experiment reports? Has he reviewed or read scientific experiment reports and papers on ESP? According to the author himself has said: I have all along not taken part, not seen or listened to, nor have I read any reports of experiments concerning ESP. Then, on what basis does this author deny that scientific practice has demonstrated its objective existence? According to what the author says: ESP is "trickery", "magic", "I don't believe what I hear, only what I see" is empiricism. If he participated, he would be viewed as a "supporter", and it is only by not taking part that he can keep from being "taken advantage of". Scientific experiments "are not strict" and their reports are "not worth" reading. It is only by relying on so-called "philosophical reasoning" that he is able to deny its objective existence. From the material he quoted in his article in opposition, it seems that the only thing he has collected, seen and heard, and read are biased Chinese and foreign articles against ESP and fraudulent investigative reports and especially made audio and visual tapes. I ask you, can he through the collection of materials opposed to ESP based on his guiding philosophy of never taking part in, watching or listening to or reading anything to do with ESP and by using counter scientific "Idealism" "reasoning", deny the objective existence of ESP which has been demonstrated by scientific practice? I believe he cannot.

II

Some people may ask: What Yu's article opposes is propaganda, does not this signify that you are not talking about the same thing. I would say, from the surface, it is not the same question, but in essence it is the same question. Although what Yu's article opposes is propaganda, in essence it is stating that ESP is "trickery" and "magic". He wants to use opposition to propaganda to deny the objective existence of ESP. Although what this article supports is research, in essence it is saying that ESP objectively exists and cannot be denied. Therefore, it is necessary to launch scientific experimental research into ESP. The reason I resolutely support scientific research into ESP is that it is a component part of somatic science, and the results of scientific breakthroughs in ESP experiments will launch a great scientific revolution.

Please note: What is basis for the so-called "grounds" for the denial of ESP in Yu's article and his book?

1. The author of Yu's article believes: ESP demonstrations and experiments were conducted under "less than stringent" conditions, some are tricks and some fail, therefore he concludes that ESP is "trickery" and "magic". I believe that the strictness of the scientific experiments in ESP has continuously increased with the development of different controversies. Scientific workers have continuously improved the environment and conditions of the scientific experiments and demonstration

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tests they have conducted. They have attained unique, double blind, opaque and irreversible, reliable and obvious testing methods which are stringent and believable. Although there are some shams and some failures, however a large percentage are actual successes. For example, the ESP vision experiments of the joint testing conducted from April to July of 1982 in Beijing (published in "ESP Research" Volume 1, Issue 1 of 1983 on page 9): The testing was comprised of 34 groups, 12 of which were successful, five groups were borderline, and eight groups were sham. The success rate was 23.5 percent. I believe that because the subjects of the experiment were humans, it is not strange that there will be some fraud. It is a normal phenomenon that scientific experiments do not succeed. Therefore, there it is unreasonable to use the fact there are some frauds and failures to deny the reality and success and to deny the objective existence of ESP. The fact that there is fraud cannot deny the reality, and the fact that there are failures cannot deny the successes. Everyone understands this. There are also many scientific experiments which are too numerous to mention. In summary, ESP has been demonstrated to objectively exist through scientific experiments.

2. The author of Yu's article believes "Such things as 'recognizing characters with the ear' is scientifically impossible, and its existence can be denied through theoretical investigation, and there is no need of experimental demonstrations" (page 196 of Yu's book). According to his way of thinking, "anything" that does not conform with classical theory is impossible. I believe that the inference of the two "anythings" is in error. I do not know whether or not he noted that all new scientific theories lie outside of old conventional knowledge and theory. All break through old conventional knowledge and theories to become new scientific theories. Did not Einstein's new view of time and space in his "theory of relativity" break through the old view of time and space of Newton's "theory of absolutes" to become a new scientific theory? According to the inference of the two "anythings", the necessary outcome would be to stop development of all scientific theory. This viewpoint is a type of "stagnationism". It can be nothing more than "creationism" wall decoration.

3. The author of Yu's article believes: "In Hong Kong I got the idea of some formal tests". From what I know, this idea did not just come up during this trip to Hong Kong. As far back as 1981 he had this "idea". In his book he wrote, "I suggest that under the guidance of the National Science Commission, there be formal experimental testing of the reality of 'recognizing characters by ear'" (page 244 of Yu's book). According to what Yu says, in 1981 the National Science Commission organized an "ESP investigation research and liaison group". Informed sources have disclosed that at the suggestion of Yu, this group had the mission of denying the existence of ESP. Those taking part excluded scientific workers with opinions different from their own, and the investigation only selected examples of fraud and failure of ESP demonstrations. Examples of success were edited out of their videos. What is the value of reports written on such a basis. They are not to be trusted. In 1988, a certain

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responsible comrade at the former "Science and Technology Daily" especially invited a delegation the United States organization which opposed ESP, the "United States Committee for the Investigation of Strange Phenomenon" to come to Beijing and Xian to conduct counter ESP demonstration in an attempt to use "outside to deny the inside". They took advantage of the superstitious beliefs of some people in the "prestige" of foreign countries to deny the objective existence of ESP in China. It has been said that when this delegation's leader was questioned by the audience, he was very embarrassed and did not reply. This is the actual situation of which Yu's article states that commissions "doubters" submitted reports. Yu also collected materials from China and foreign countries both recent and old which were in opposition to ESP in an attempt to deny the objective existence of ESP, all without success. I now have doubts about the sincerity of his "ideas" in Hong Kong. If he is really sincere, scientific experiments on ESP are being conducted every day in many institutes of higher learning and research agencies in all the major cities of China. Why does he not take part in these but comes up with an "idea" in China to do some testing? If this testing "idea" is really sincere and not just a sham, I would be willing to facilitate this formal testing.

4. The author of Yu's article believes that the "the propaganda of such 'ESP' as 'recognizing characters by ear' are direct opposition to the basic principles of materialism." This is a line from page 258 of Yu's book in an article called "An Important Situation on the Philosophical Front Lines in China in 1981" (hereafter called philosophical article). The spirit of what he said is that the objective existence of ESP is in direct violation of the basic principles of materialism. In 1984 I wrote an article entitled "An Important Situation on the Scientific Front Lines in China in 1981" which was published in volume two issue two page 97 of "ESP Research". This article was written as a rebuttal to the "philosophical article" in Yu's book. I will not repeat it here. Yu's also quoted many times in his books Engels' criticisms of "spiritualism", saying today's research in ESP was a variation of "spiritualism", that it was a pseudoscience in basic opposition to materialism, and that it was severely criticized in Engel's "Dialectics of Nature". This is actually the opposite of the truth, because the old "spiritualism" research into ESP was to illustrate the effects of the "spirits" and modern scientific research into ESP is to illustrate the effect of matter. Ancient and modern, "spiritualism" and science, "spirit" and matter are all completely different, not the same thing at all. To say China's research into ESP is a "variation" of "spiritualism" is pure slander. Yu also said that taking a stand in approval and support of ESP research was to "stand on the side of Spiritualism" and was to take a stand "in opposition to" Engel's "Dialectics of Nature". Although the basis for Yu's argument was to "use the old to deny the present", using reasoning to deny practice does not conform with scientific logic and is in violation to the principles of materials, under the weight of this label, many people who approve and support ESP do not dare to speak up and scientific experiments in ESP cannot obtain funding. No one writes articles on it in publications

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anymore. However, truth belongs to those who grasp it through scientific practice. In the past ten years, thousands of dedicated scientific workers have used their own money to continue their experiments. They have demonstrated that ESP does objectively exist, and they have achieved gratifying fairly deep level achievements in theories for unique phenomena in ESP.

In summary, Yu does not have a leg to stand on in his attempts to deny the objective existence of ESP. I believe that ESP, which has been demonstrated by scientific practice to objectively exist, can stand up to testing, and cannot be denied by counter scientific "idealism" "reasoning".

III

In the past ten years, there have been three stages in ESP research operations. The first stage was primarily the use of investigations to learn and discover about such paranormal abilities as ESP and PK. The second stage was primarily the use of scientific experiments to test for the reality of such ESP abilities as had been discovered. The third state was primarily the use of scientific experiments for analytical research of ESP abilities which had been demonstrated through scientific experiments in order to establish unique phenomena theories. Through scientific demonstration, when people enter a state of ESP or high level QIGONG state, they can give off a certain radiation. I am going to use what the Chinese ancients called "QI". This type of "QI" is material, and can be detected by infrasonic detectors, electromagnetic wave detectors and slow neutron detectors. This is an objective, undeniable fact. It's characteristics are not like those of any other matter or energy so far discovered in the universe. When someone enters an ESP state or high level QIGONG state, this "QI", under conscious control, can generate PK abilities. The process of this type of ESP perception is different from that of ordinary sensing function perceptions. Ordinary sensing function perception processes are where external signals directly contact the human sensory organs and are carried to the brain through the nervous system, thus perceiving the existence of external objects. The ESP perception process is where the consciously controlled "QI" comes in contact with objects in the outside world and is fed back to the human body through channel systems to the brain. When a person enters an ESP state or a high level QIGONG state, this "QI" controlled by the consciousness also generates PK abilities. The process by which of this type of PK ability affects objects in the objective world is different from the process of ordinary motor functions altering the objective world. The process by which ordinary motor functions alter the objective world is the human body under the control of the consciousness and not the "QI" which alters the objective world. The process by which PK affects the objective world is the consciously controlled "QI" and not the human body which affects the objective world. This is an extremely important scientific discovery. Because in our present stage of research into unique phenomenon theory we are unable to come up with a satisfactory explanation, philosophically we

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say that PK develops the dynamic effects of the consciousness. Since it is the development of dynamic effects of the conscious reflection of the objective world, it also develops the dynamic effect of influencing the objective world. It not only causes macroscopic changes in objects, but it also causes microscopic material change, all the way down to molecular and atomic changes. Because of time and space limitations, I cannot report all the scientific experiments and research into unique phenomenon theory. I apologize to the readers.

Finally, I would like to make clear why I resolutely support research into ESP. First of all, it is because ESP not only occupies an important position and is of great value in somatic science and in overall modern science as well, but from the scientific achievements so far, it challenges the fundamental theories of modern science. Success in the unique phenomenon theories in somatic science research have caused those in the scientific world to sense that they may have to alter and further develop the fundamental theories of modern science. The second reason is that it is unfair to have people oppose and no one support scientific research which could greatly influence the advancement of science. Furthermore, I hope it gains the support the scientific workers of China and even of the entire world and that they will take part in the scientific research to promote the development of modern science theories through somatic science research. I have used some unique phenomenon theories which have been obtained through the scientific experiments on ESP in this article. Because I may have made some errors in scientific logical reasoning, I hope everyone will help point them out.

Written in Beijing, Haidian, in February, 1989.

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HIDDEN INFORMATION IN THE SYNCHRONOUS BRAIN WAVES DURING QIGONG STATE

BY: Mei Lei (Space Medicine Engineering Institute, Beijing)

ABSTRACT

This article represents thorough research of the phenomenon, about which the author published an article ten years ago, of ultra synchronous brain alpha waves during the QIGONG state. The application of KEFT technology (ET) created by this laboratory, made it possible for us to uncover a new information system hidden in QIGONG brain waves.

We discovered the following series of significant facts.

1. The selectivity of the extrasensory spectral line of the ET system oscillated. As a background of the overall brain activity, the selectivity of the S4 spectral line related to 5-HT and its selectivity was enhanced.
2. Brain activity with strong coherence. The left and right brain coherence was strongest in the temporal regions F3 and F4. At the same time there was a unique frequency distribution and enhanced harmonics.
3. Right Brain S4 system activity was relatively dominant.
4. During a QIGONG state sympeda spacial structure was more closely related to the "golden rule" than during normal states.
5. During different types of QIGONG, we observed different S system structures, this is of major significance in diagnosis and QIGONG treatment.
6. This article also discusses the significance of these discoveries as well as the advantages of stressing ET methods in QIGONG research.

KEY WORDS: QIGONG, brain waves, EEG, left and right brain connection.

We have demonstrated that during QIGONG, there is a phenomenon of ordered brain waves. The temporal alpha wave synchronization is markedly increased and the frequency shifts to the left¹. There have been a string of similar reports from foreign countries². However, the significance of the synchronization of this type of brain wave is still not clear, and what type of information is hidden in this type of synchronous brain waves has not yet been decoded. In the past ten years, we have persisted in thoroughly uncovering the information hidden in synchronous brain waves during the QIGONG state. This article briefly summarizes what we have achieved.

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THE S SYSTEM OF THE BRAIN

Based on system theory, synergetics and theories related to dissipation structures, we systematically analyzed the brain, and thoroughly investigated the uneven rising and falling of the brain waves, developing rising and falling brain wave charting technology (shortened to ET). We discovered that the rising and falling of brain waves is controlled by a certain deeper layer functional system (S system) in the brain. This hidden system² can be separated from ordinary synchronous brain waves.

The S system separated from the other brain waves looks to be chaotic, but under different conditions it can show extreme loop type selective oscillation, showing the dominant spectral line of different frequencies. We performed fairly detailed research and analysis on the S spectral structure composed of S1 through S 225. (S1 through S 225 are the spectral line sequence, multiplying times 0.032 gives the frequency in megahertz.)

On the S spectrum, the behavior of the various attractions can be displayed, showing up as selective oscillation, resonance and continuous oscillation forms. Also, in different regions of the brain, it formed various characteristic time and space structures. In order to separate out this information, it is also possible to perform multiple level analysis, currently a three level is commonly used. This is (1), most dominant frequency (D1) analysis; (2), dominant frequency group (D1 to D8) analysis; and 16 frequency spectrum analysis. For this article, we will include the results of these analyses, where through human and animal experiments, we "broke the code" of the significance of a series of characteristic S spectral line nervous activity and neurochemistry, demonstrating that characteristic S spectral lines have very strong specificity. Under typical conditions, moving one frequency can completely alter its physiological significance, and furthermore, it is closely related to the obscure processes of the brain such as its neurochemistry. For example, we have already demonstrated that 5-HT selectively enhances the S4 spectral lines, D selectively enhances the S11 spectral line, ACH and NE enhance a series of special spectral lines. Furthermore, S13, S26, can be enhanced by barbital. S1 and S2 can also separately interact with two different types of cyclical activity of neuroglia cells. There is a quantity of experimental data which demonstrate that the S system possesses a quantization nature, which indicates that at least part of this system comes from the quantum release process of the nerve medium and these S oscillations can be viewed as a type of probability wave.

The separation of the S system from the brain wave fluctuation information is a level of key significance in the brain's self ordered activities. It controls a large amount of coordinated activity of nerve elements, which are the ordered parameter effect of the S system at a

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number of levels of activities in the brain⁴. This ordered parameter effect of the S system, acting to cause many sub systems to enter an ordered state, so it must play a major role in the ordered process of developing the Qigong state.

We have already published the results of achievements in this aspect⁵⁻⁷ which demonstrate the existence of the S system and its relationship to the QIGONG state, providing materials on a series of self ordered phenomena of this system during the QIGONG state. This article will delve even deeper in this research, allowing for a more thorough and overall understanding of the hidden information in the synchronous brain waves during the QIGONG state.

APPEARANCE OF HIGHLY SELECTIVE OSCILLATION OF THE S SPECTRUM DURING QIGONG STATE

Illustration 1 (a) shows the collective spectrum of the most dominant spectral line of the S system during the QIGONG state. We can see in this illustration that during the QIGONG state, marked peaks appear in S4 and S6. The most evident S4 has the strongest resonance (4, 8, 12, 16, , underlined in the illustration). We also performed resonance series analysis on several of the most basic S frequencies, with marked results. These basic series were: the S3 series (3,6,9...), the S4 series (4,8,12,16,...) and the S13 series (13, 26, 39,...). Through basic resonance series analysis of the most dominant frequency levels during the QIGONG state (illustration 1 (b), we can clearly see that the S4 series is obviously dominant. A stratified analysis of the dominant frequency groups during the QIGONG state also allows us to see (see illustration two) that compared to a state of rest, the S4 series resonance during QIGONG is markedly elevated. This phenomenon exists for ZHANGYU, ZHAO GUANG, DAZHOUTIAN, and XIAOZHOUTIAN. Normally the S4 and the S3 systems are mutually inhibiting. In 19 experiments with 10 QIGONG masters, the S4 series was clearly greater than the S3 system ($P < 0.001$).

The S4 is related to 5-HT. During the QIGONG state, the dominance of the S4 series resonance indicates that brain has entered a relatively inhibited state. Some people have reported that during the QIGONG state, there was a markedly increased 5-HT. Our results were consistent with this. The 5-HT can cause sensations of peace, comfort and stability. These are the same as the sensations during a QIGONG state.

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ILLUSTRATION ONE: DOMINANT S SPECTRAL LINE COMPOSITION

(a) TOTAL SPECTRUM

(b) BASIC RESONANCE SERIES

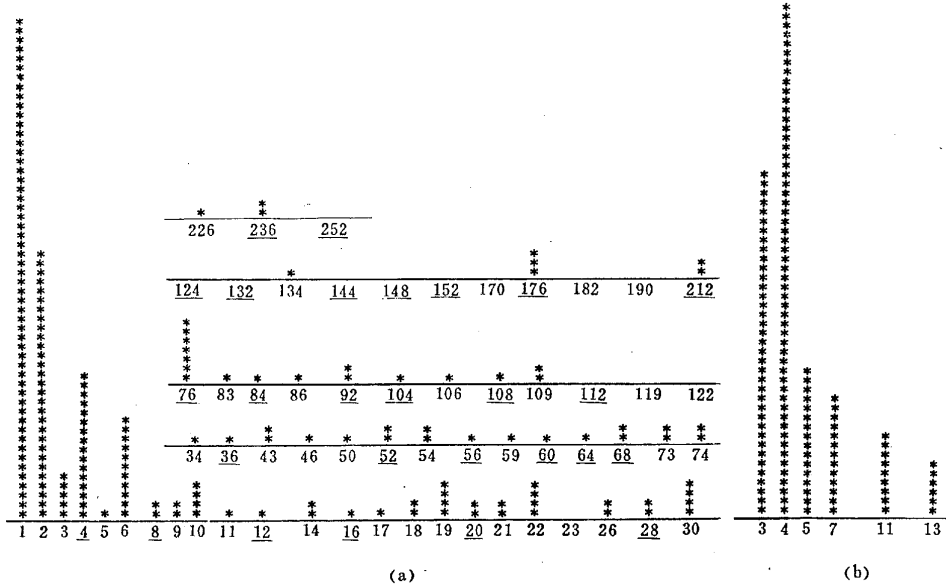


图 1a 气功态中最优 S 谱线构成的总谱

b 气功态中最优 S 谱线构成的基础谐振系

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ILLUSTRATION TWO: S4 SERIES ENHANCEMENT DURING QIGONG STATES

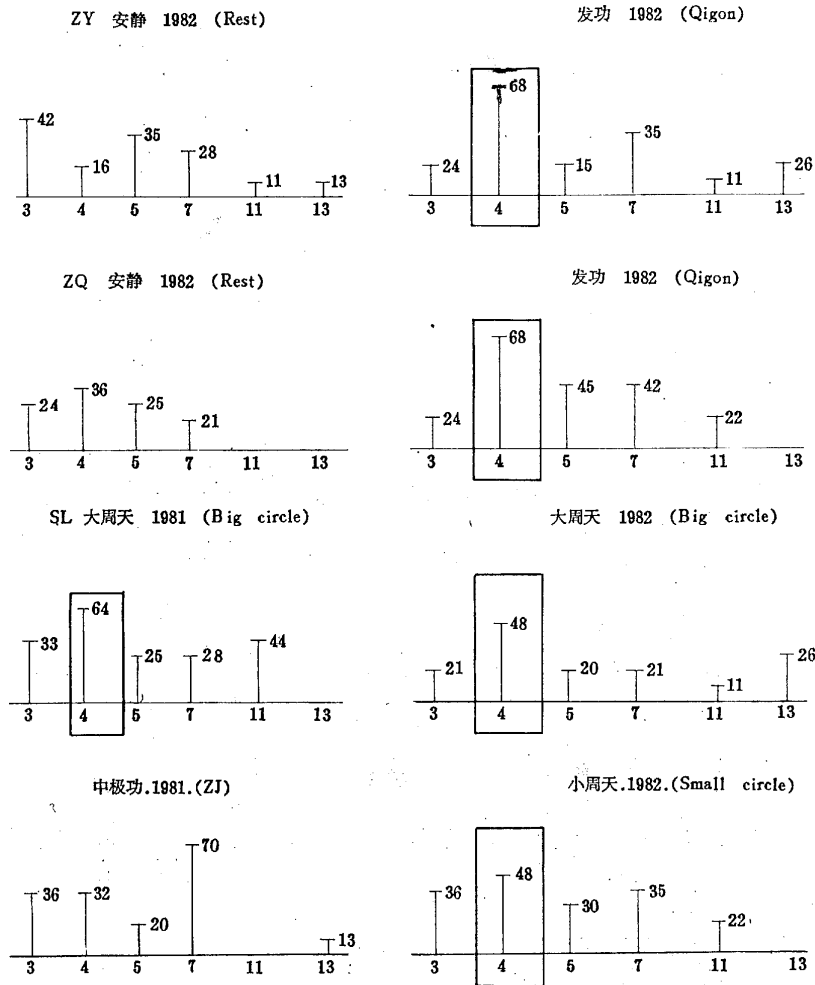


图2 气功态中S4系增强

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CEREBRAL STRONG COHERENCE

The phenomenon of frontalization was one of the earliest phenomena we noted during our research into Qigong. In QIGONG, the alpha synchronization is mostly marked in the frontal lobes. We used ET technology to further determine the dominant effect of the frontal lobes.

In the analysis of the S series most dominant frequency analyses, we can clearly see this frontalization phenomenon. Illustration 3 A is a comparison of the S series left and right frontal and rear dominant frequency coherence. The frontal regions (F3 and F4) coherence is the strongest, and the coherent dominant spectral lines are the most. Furthermore, there are S4 resonances (S4, S76, and S176). The central Regions (C3 and C4) are secondary, and there is a reduction in the coherent most dominant spectral lines. The S4 series resonance is also weaker (S4 and S76). In the parietal regions and the occipital regions, there is a marked reduction in this type of most dominant spectral line coherence, and there is no appearance of resonance.

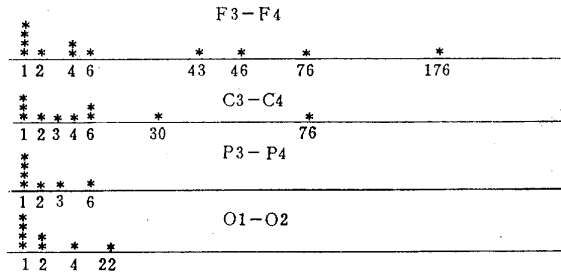


ILLUSTRATION 3 A: D1 COHERENCE OF LEFT AND RIGHT BRAIN

The distribution throughout the various regions of the brain of the S4 series as the most dominant frequency is shown in Illustration 3B. Here we can also see the numbers for the S4 series are highest in the left and right frontal regions.

B. D1 分布(S4 系总数)

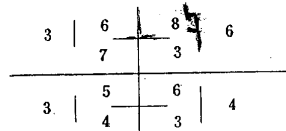


ILLUSTRATION 3 B: D1 DISTRIBUTION (S SERIES TOTALS)

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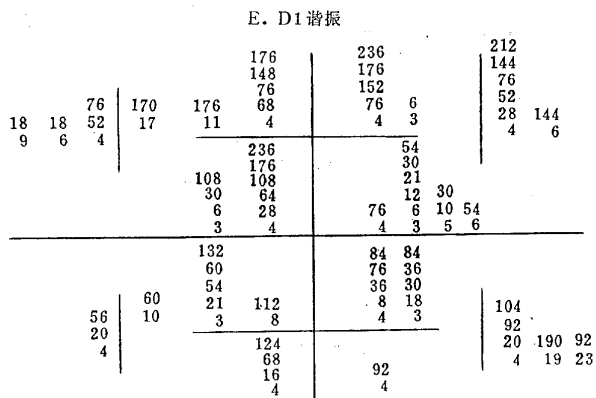


图3 最优额颞脑优势分析

ILLUSTRATION 3 E: D1 RESONANCE
F. D1 连续谱线

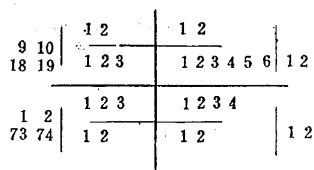


ILLUSTRATION 3 F: D1 CONTINUOUS SPECTRAL LINE

This phenomenon of strong coherence of the frontal brain most dominant frequency, is a characteristic of the QIGONG state. In pathological states, although there is a forward shift of the alpha, there is no appearance of S series coherence dominance is in the frontal brain, but there is dispersed S series coherence dispersed throughout the brain. It can only be implored following successful treatment of the pathological state. Further, a shift to the left of the alpha frequency can be observed in old people, with the frontal brain dominating, but the S series analysis demonstrates that in old peoples' brains, the most dominant coherent spectral line is the S1 and not the S4, qualitatively different from QIGONG.

Illustration 4 (see inside cover illustration four A, B, C and D) (Translator's note: not available) are color displays of the degree of coherence of the dominant frequency groups of the left and right brain under various states. From the bottom to the top they are: the quiet, eyes closed state (D), state of resting after memorizing homework (C), state of doing memorization (B), and the QIGONG state (A). The red is the highest degree of coherence for that individual state. We can see that

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the regions of strongest coherence regions are at the front of the brain and move successively toward the rear. The state of quiet is in the occipital regions, resting is in the parietal region, memory state is in the mid and frontal regions and the Qigong state is primarily in the frontal regions. Statistical analysis shows that the degree of coherence with frontal connecting regions is markedly higher than the parietal connecting regions ($P < 0.001$). The degree of coherence between F3, F7 and F4, F8 are markedly higher than the average degree of coherence of other regions of the brain ($P < 0.05$). The QIGONG state is clearly centered in the frontal regions, and its coherence is markedly higher than the state of resting ($P < 0.025$) and of memorization (0.001).

Entering into the coherence of the left and right frontal areas are the S21, S42, S84, S22, S44, S88 and S176 series as well as the S4 series. These are all characteristic spectral lines of the QIGONG states of different types of QIGONG.

We have discussed the effects of the frontalization phenomenon on the evolution of the functions of the brain. The frontal brain is believed to be an important regions which is not yet understood. Its role in QIGONG has been mentioned time and again. However, what information is hidden in the frontal brain alpha dominant frequencies has only been disclosed by the results of using ET analysis in this article.

RIGHT BRAIN COHERENCE DOMINANCE

In the above analysis of the strong coherence in the frontal brain, we also can see that the right frontal area is dominant. In Illustration 3 B, the S4 distribution in F4, F7 is higher than on either side. In illustration 3 D, the appearance of continuous frequencies in F4, Cf regions are higher than on either side. In illustration 3 C, the coherent spectral lines that appear in the four regions are also most obvious in the right brain.

In dominant frequency series analysis, we also see similar phenomena. Comparing the left and right brain, the S4 series dominance is more marked in the right brain ($P < 0.025$).

Illustration 4 are examples of a number of experiments. The same person during the same test showed increased intensity of S4 series resonance in both hemispheres, but the S3 series resonance intensity tended to drop. As a result, the S4 series appears to be dominant over S3 series (see the numbers in parentheses in the illustration). Even though the left brain at times also has S4 series dominance (Wang Songling (WL) example in the illustration), but it is more marked in the right brain. Other people have S3 series dominance in the left brain, and S4 series dominance in the right brain. Usually, the S3 series and the S4 series act to counteract each other. The S3 series tends toward stimulation, and the S4 series tends toward inhibition.

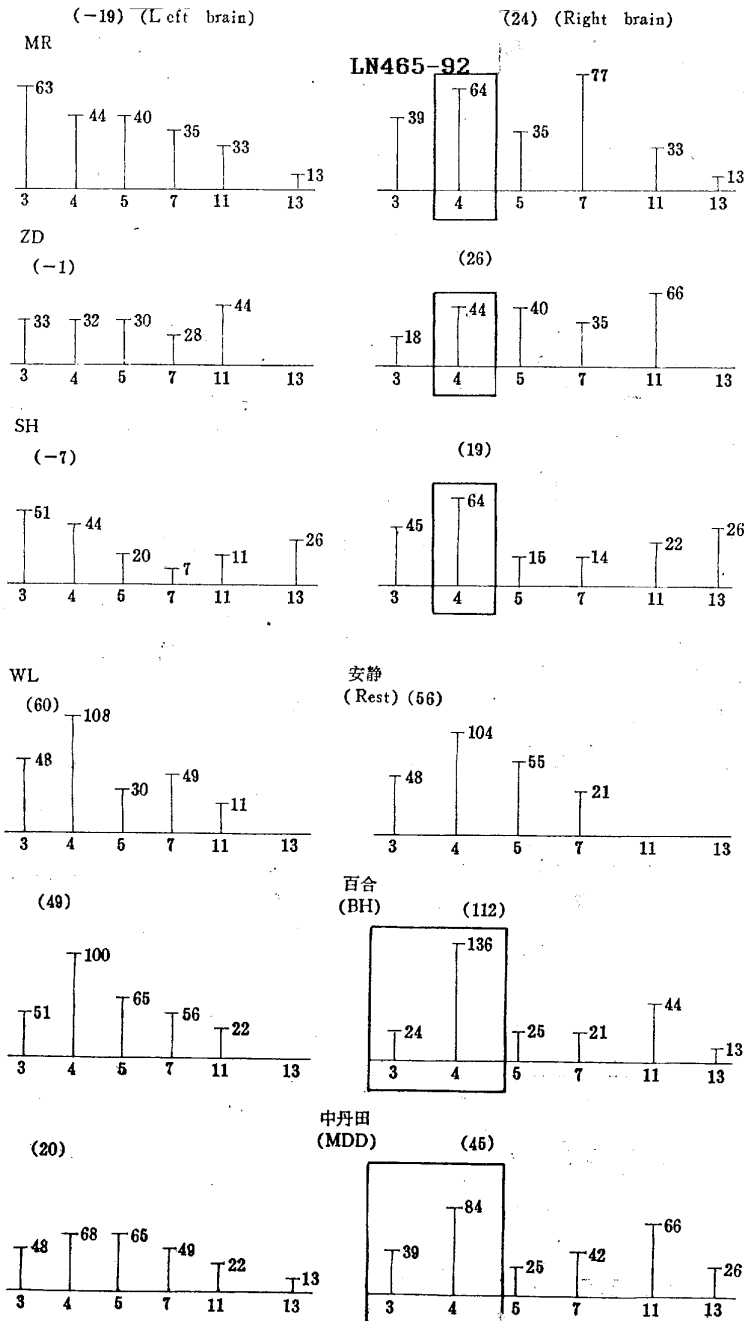


ILLUSTRATION 5: LEFT AND RIGHT BRAIN S4 SERIES DOMINANCE IN QIGONG STATE

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Illustration 6 (Inside cover 4. (Translator's note: not available) is a colored display of the S4 series resonance dominance of the right brain. The numbers in the illustration were extracted by subtracting the S3 resonance value from the S4 resonance. The values for the various regions of the right brain were all positive after subtracting the corresponding resonance numbers for the corresponding areas of the left brain, indicating that the right brain has clear S4 series dominance.

It is usually believed that the right brain is a region with much potential capabilities, the functions of which are far from realized. A number of people have postulated that the energy source for the QIGONG potential is the right brain. However, experimental demonstration of this has been lacking. This work used ET technology to check on right brain dominance after frontal brain dominance of the QIGONG state. The results turned to postulations into scientific facts.

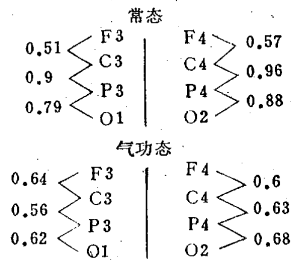


图7 气功态中前后相邻脑区功率优势比逼近 0.618

ILLUSTRATION 7: THE FRONT TO REAR CONNECTING REGIONS POWER LEVEL DOMINANCE APPROACHES 0.618 IN A QIGONG STATE

MOSAIC TYPE SYMMETRY OF THE BRAIN

We have already published facts on the appearance of mosaic sympeda occurring in the brain during the QIGONG state, and we have pointed out its consistency with the phenomenon of left and right brain sympeda in morphology. The brain sympeda forms a yin and yang diagram of the brain.

During excitation, the left frontal brain S2 is dominant. When practicing inhibition exercises, the right rear brain Sa is dominant. When practicing entering tranquility and thought concentration, the left forward brain and the right rear brain are in a balanced state.

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The new material indicates that the sympeda not only is expressed in power, but also is expressed in other parameters such as the intensity of resonance and the characteristic frequencies. During the QIGONG state, the resonance intensity distribution of the various regions of the brain also look like a mosaic sympeda.

It seems that the brain cross structure is a common phenomenon. In many other experiments, we always observed this type of characteristic image. We already have articles summarizing this type of phenomenon.

Further analysis also indicates that during a QIGONG state, the ratio between the left frontal and the right occipital areas of the brain approaches the golden division rule, which is tending toward 0.618. Furthermore, during the QIGONG state, mosaic sympeda image approaches 0.618 in the forward to rear connecting regions of the brain in the left and right brain, while the normal human brain image has more scattered values (illustration seven).

After Sperry discovered the non symmetrical relationship between the left and right brain, there has been a great deal of research work concerning the relationship between the left and right brains. Our results represent a major qualitative advancement. These results allow analysis of the relationship between the left and right brain to enter a stage of greater detail and precision. From this aspect, the spacial structure of the brain is perfect.

DIFFERENT STYLES OF QIGONG HAVE DIFFERENT S SYSTEM CHARACTERISTICS

The S4 series resonance dominance described earlier is a common phenomenon of QIGONG, and it occurred in about 80 percent of our experiments. However, in addition to this basic change, in different styles of QIGONG there occur different additional dominant series. The clarification this problem will help to differentiate between the different styles of QIGONG.

By analyzing the most dominant frequency of each channel, we can see the characteristics of each type of QIGONG. Illustration 8 is a comparison of the recordings of four channels of brain waves of X. S. Q. in five continuously experiments of excitation QIGONG and inhibition QIGONG. From this, we can see that during excitation, the S2 is dominant, as well as the S5 series harmonics (S5, 15, 20, 30,...). During inhibition, the S1 was dominant, as well as the S4 series harmonics (S24, 32, 64).

In 12 channel brain wave tests (illustration 3, D through H) Yishoubaihui (phonetic) and Yishoudantian (phonetic) were compared. The former saw S5 appear in addition to the S4. In the latter, the S4 series was dominant. During entering tranquility, there was a typical quasicyclical structure (D21, S22 - S43: S21, @52 - S73). In addition,

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during the QIGONG state, S70 through S80 regions were markedly stronger than in normal persons. Of these, S74 is mostly seen in the better QIGONG states, some show S37 during resting, and its harmonic, S74, during the transition of entering a QIGONG state. With similar S4 series dominance during QIGONG, some people will have more S4 series harmonics (B), and some people will have concentrations of the individual S4 series harmonics (C).

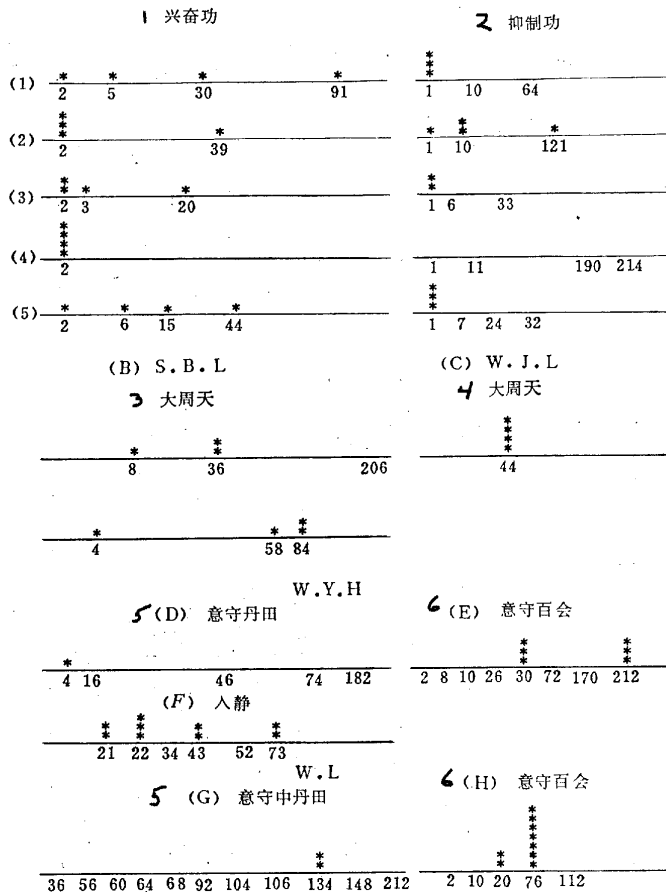


图 8 不同功法最优谱线结构比较

ILLUSTRATION 8: DOMINANT SPECTRAL LINES OF DIFFERENT QI GONG STATES

1. Excitation. 2. Inhibition. 3. Big Circle. 4. Big Circle. 5. Yishoudantian. 6. Yishoubaihui.

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In an analysis of the eight dominant frequencies of each channel, we can also see this type of difference in the different types of QIGONG. Illustration 9 shows two examples of the appearance of S5 series harmonic dominance. The left shows the various individual brain regions showing relatively many harmonic series of the S5 base frequency. The right shows the overall strength of the S5 series harmonics markedly higher than other base frequency series.

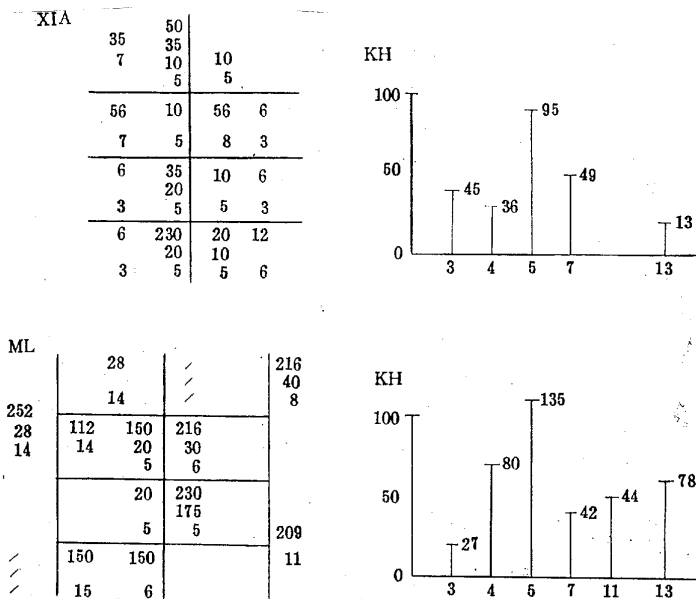


图9 增强S5系的气功

ILLUSTRATION 9: QIGONG WITH ENHANCED S5 SERIES

The S5 series is enhanced by acetylcholine. In addition to QIGONG, acupuncture has also been observed with S5 series harmonic enhancement.

Illustration 10 is an analysis of the D1 through D8 harmonics in different types of QIGONG. Here, we can also see a similar pattern. The QIGONG master using "whirling QIGONG" (ZRD) had a markedly enhanced S11 series. The S11 series enhancement has also been seen in blind persons. S11 is related to DA. In animal experiments, injection of L-DOPA caused a marked enhancement of S11. When patients with Parkinson's disease are treated with DA, the S11 series also recovers. It is generally believed that DA enhances the coordination movement of the external cone system. "Whirling QIGONG" and blind persons place relatively high demands on the external cone system. It is possible that because of this, it causes DA

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activity and S11 series enhancement. There are reasons to consider whether or not it is possible to use this idea to treat Parkinson's disease.

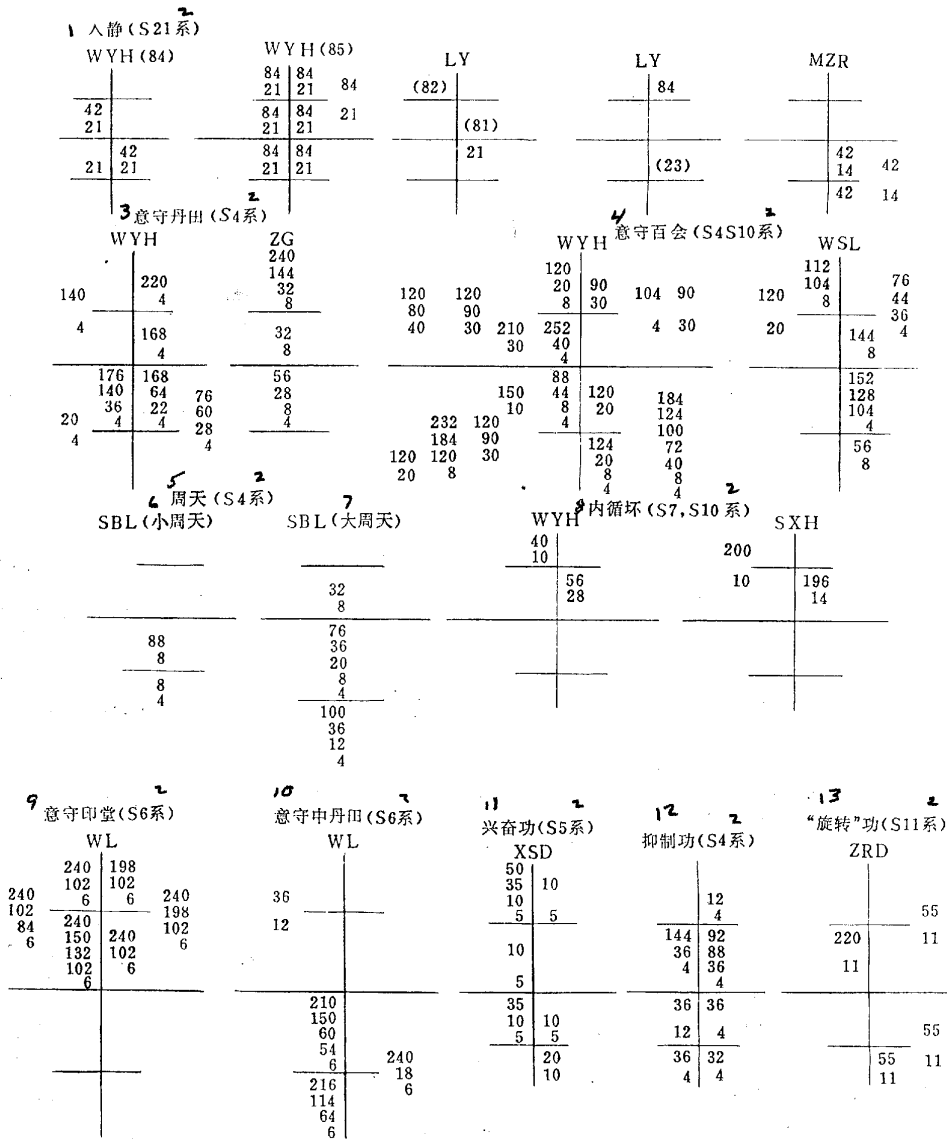


ILLUSTRATION 10: ANALYSIS OF THE D1 TO D8 HARMONICS WITH DIFFERENT TYPES OF QIGONG

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1. Entering Tranquility. 2. Series. 3. Yishoudantian. 4. Yishoubaihui. 5. Circle. 6. Small circle. 7. Big circle. 8. Internal circulation. 9. Yishouyintang. 10. Yishouzhongdantian. 11. Excitation. 12. Inhibition. 13. "Whirling" QIGONG.

In addition, during Yishoubaihui, the S11 series (S22) also joins in. Conversely, during Yishoudantian, the S13 series (S22 (sic)) joins in. The S11 series tends toward excitation and is part of Yang. S13 series is enhanced during Barbitol anesthesia, is a strong inhibitor, and is part of Yin.

When entering tranquility, the S21, S42, and S84 series is markedly enhanced. Deaf persons have enhanced S42, indicating that sensing of the external world is inhibited.

The results above indicate that during QIGONG states, there exist selective chemical oscillation. It generally appears in the S4 series dominant harmonics related to 5-HT. At the same time, different dominant harmonic series appear during different types of QIGONG. QIGONG treatment must consider these selections. ET technology provides an objective method to check this type of selectivity. It can determine the S system structure of each special patient, and then, targeted enhancement of certain oscillation series or reduction of certain oscillation series can achieve the goal of diagnosis and selection of the proper treatment.

CONCLUDING REMARKS

The results of the six aspects discussed above fully demonstrate that there is a tremendous amount of information hidden in the synchronous brain waves during the QIGONG states. At the same time, it demonstrates that ET technology can effectively reveal the information in ordinary brain waves, and thus opening up a new avenue and new realm for QIGONG research.

The results achieved indicate that the information hidden in the synchronous brain waves during QIGONG are neither the same as the forward shifted alpha synchronous waves of the pathological state nor are they same as the enhanced alpha synchronization of the frontal areas of old people. In the QIGONG state there appears selective vibration of the S series, selective coherence and harmonics, as well as characteristic spacial structures.

The shift from the ordinary S3 series dominance to the QIGONG S4 series selective vibration, the shift from the ordinary rear brain coherence to the QIGONG frontal brain coherence, from the ordinary left brain dominance to the QIGONG right brain dominance, and from the ordinary non symmetrical structure to the mosaic sympeda, are all manifestations of qualitative shift behavior of the brain. This demonstrates that during a QIGONG state, the brain enters a completely new different qualitative state. The 5-HT dominance effect ensures the brain enters an adjusted

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state of quiet, comfort and stability. The effect of frontal brain and right brain dominance ensures the brain latent abilities are brought out, enhancing the connection with the hypothalamus, improving the control over the internal world of the body and the subconscious realms. The entire cross structure of the brain reflects a "brain Yin Yang diagram" of balanced Yin and Yang and optimum functional state. Different types of Qigong have their commonalities and their own unique qualities. Researching their commonalities will help in describing the basic mechanisms of the QIGONG state. Clarification of their unique qualities is of important practical significance in diagnosis and determination of proper treatment.

Acknowledgements: This work used testing materials from the following QIGONG masters and practitioners: Zhang Yu, Zhao Guang, Xia Shuangquan, Wang Songling, Wang Yonghuai, Wang Jialin, Sun Benlian, Ma zonglong, Zhang Rongtang, Song Xiunhong, Li Yan, Wei Jianyan. This article also made use of experimental data from Bai Yanqiang and Zhou Yunlong. Over many years of testing and analysis, I have enjoyed a great deal of cooperation from Zhou Quandai and Liu Yuehong. I would like to express our deep felt gratitude to all these people.

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THE EFFECTS OF ESP ON THE STRUCTURE OF SILICON CRYSTALS
AND PRELIMINARY INVESTIGATION INTO ITS MECHANISM

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ABSTRACT:

In experiments of using ESP to remove objects from a sealed glass container, silicon monocrystalline chips were used as samples on the walls of the container. After forty some of these monocrystalline chips were processed through esp, it was found that three had undergone a unique transition. Their structure had changed to a microcrystalline orientation. This change is a "soft change", and after a length of time it will disappear. We present some preliminary discussions of the possible mechanisms involved in this change.

KEY WORDS: ESP removal of objects from a sealed glass container, silicon, monocrystalline orientation.

In ESP and QIGONG research, a number of phenomena have already been discovered with illustrate that people can, when in certain states, affect the structure and nature of matter¹. Because people with this ability are extremely rare, and because we are not yet able to grasp the pattern of their appearance, it is very difficult to capture positive results. It is even more difficult to study the mechanism of this phenomenon on the basis of a few examples. However, it is just because of this that attempted investigations by modern science into this question are of significance. This can help us reduce the blindness of our research and to find the direction for further research. In order to facilitate discussions with persons not specialists in physics conducting research in somatic science, this article will first simply introduce several examples of the results of the experiments on the effect of the extraction of solid objects through a solid wall of crystalline structures², and at the same time explain some basic knowledge of crystalline structures. Then we will explore the possible methods that ESP could affect crystalline structures, and finally we will suggests some additional research and experiments for this question.

"Extraction through a solid wall" refers to moving a test object out of a sealed container. It is a fairly stable ability of the ESP person, Zhang X X. It is now known that there are also other people in China with this ability. At first, the purpose of our experiment was to check whether the "extracted" objects were actually the same objects originally placed inside the bottle. Later, our purpose was to test whether or not the extracted objects had undergone any microscopic changes. We performed

composition analysis and structural analysis of many objects that had been extracted. In order to facilitate analysis of the structure, we selected several crystals of simple composition as test objects. These included NaCl, LiF, silver and silicon.

In order to determine whether or not the test objects were actually removed from the container with ESP, we used X ray analysis on the NaCl, LiF and silver, and the results did not disclose any changes in the composition or structure of the test objects. For example, illustration one shows three pieces of silver with similar structure. One of these pieces had not been used as an ESP extraction sample (control sample). One piece had been processed but had not been extracted (excess sample), and the other piece was a test sample which had been extracted. Because the subject did not know what the test samples in the bottle were, this type of analysis presents decisive collateral evidence.



图1 Ag的X衍射分析曲线
(a)对照 (b)剩余 (c)取出

ILLUSTRATION ONE: SILVER X-RAY DIFFRACTION ANALYSIS GRAPHS

(a). Control sample. (b). Excess sample. (c). Extracted sample.

In order to further study the process of extraction, and to investigate whether or not there had been any discernable change in the extracted sample or the container, we selected samples of silicon with relatively simple composition and structure. We also put together a box of silicon to use as a container for the experiments.

Solid objects are divided into two major categories, crystal and non crystal. Crystal objects are further divided into monocrystals, polycrystals, and microcrystals. The characteristics of monocrystals are long range order. Those of the polycrystals are that they are composed of different monocrystal particles with several different orientations. There is a strict period inside every crystal particle, but between the crystal particle there is no period. It is generally held that poly

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crystals have a granularity of less than 1000 angstrom, they are called microcrystalline. Non crystalline is only a short range ordered (recently close to inter atom), but still can retain several crystal properties.

A major method of studying material structure is X-ray and other diffraction technology. Through the use of diffraction instrument methods, it is possible to automatically record the intensity of the diffraction and the $2i$ angle relationship (i is the inclusive angle of the X-rays and the surface of the object). Microcrystalline silicone has many peaks, and its peak position $2i$ (for a Cu taret) are 28.46, 47.3, 36.18, 69.20,, and (100) silicon monocrystalline silicon peaks at 69.20. Microcrystalline silicon with (100) direction orientation peaks at 69.20, with a very wide spectrum of peaks.

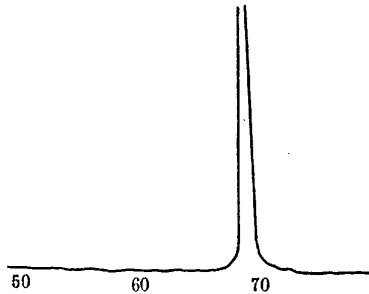


ILLUSTRATION TWO: MONOCRYSTAL SILICON X-RAY DIFFRACTION SPECTRAL LINES

We used monocrystalline silicon pieces as test objects or container walls. Prior to and after the experiment, we performed X-ray diffraction analysis of the silicon pieces. The spectral lines of the monocrystalline silicon pieces prior to the experiment are shown in illustration two. After the experiment, of the 40 pieces of silicon processed, most still retained the spectral line monocrystalline structure shown in illustration two. However, there were three pieces from different experiments which had different X-ray diffraction spectral lines. The simple expression of these is shown in illustration three.

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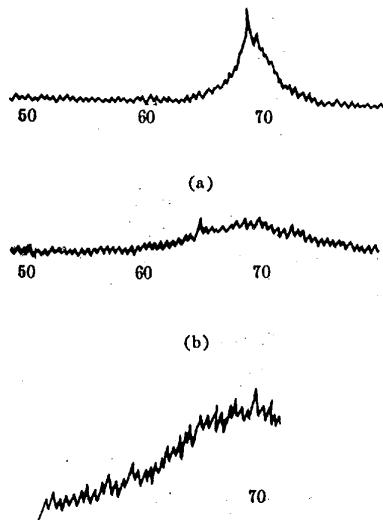


ILLUSTRATION THREE: X-RAY DIFFRACTION SPECTRAL LINES OF THREE
PIECES OF MONOCRYSTALS PROCESSED FOR EXTRACTION

- (a). Extracted from glass bottle on 24 August 1987, analyzed on 31 August.
- (b). Left in the bottle after 28 September, 1987, extraction experiment, analyzed on 18 October.
- (c). Left in the bottle after 14 March, 1988, extraction experiment, analyzed on 24 March 1988.

As shown in illustration three, these three pieces of silicon which had been processed for extraction had X-ray diffraction spectral lines different from the spectral lines of the monocrystals, and are the spectral lines of microcrystals with 100 direction orientation. In order to recheck the results of the analysis, we repeated the analysis of the two pieces (a) and (b) in December of 1987. We were surprised to discover that their structural X-ray diffraction spectral lines no longer appeared as in illustration three, but had reverted back to the spectral line shown in illustration two. As for piece (c), one week after the original analysis (March 31, 1988), a follow up analysis was performed, and the same thing occurred. This indicates that their transition was of a "soft" nature. This is somewhat akin to the demagnetization of an electromagnet following after a period of relaxation following the turning off of the current.

Because the extraction experiments were conducted in Beijing and the

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X-ray analysis was conducted 2,000 kilometers away in Chengdu, and the subject did not know when or where the analysis would be done, what instruments would be used, or who would be conducting it, so there is reason to believe that the changes in diffraction spectral lines indicate corresponding changes in the crystalline structure.

In order to understand this change, we can first take a look at the general changes in material crystalline states.

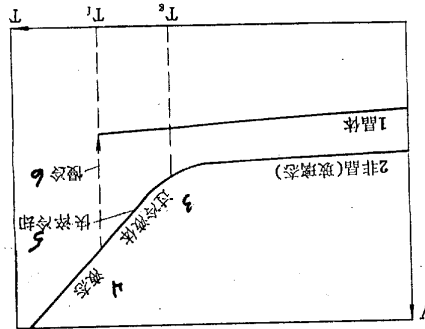


ILLUSTRATION FOUR: CHART OF MATERIAL COOLING PROCESS

1. Crystalline.
2. Noncrystalline (glass).
3. Super cooled liquid.
4. Liquid state.
5. Rapid quenching cooling.
6. Slow cooling.

NOTES: T_f is melting point, and between T_g and T_f is the temperature range of the super cold liquid.

Crystals and non crystals under the appropriate conditions can change back and forth. For example, in order to obtain crystals, it is possible to control a temperature change process to melt the material until it becomes liquid, and then allow it to cool slowly (as shown in line one in illustration four), or, if one wishes to obtain non crystal, then it can be quenched (as shown in line two in illustration four). In this manner, if a melted material originally had a monocrystalline structure, following line two, there will be a transition from a monocrystalline to noncrystalline structure. Conversely, it is possible to change a noncrystal to a monocrystal. Furthermore, at temperatures below 40 degrees Kelvin, using a 120 KeV powered $As + Si_{1-x}Ge_x$ ($x = 0.16$ to 0.29) and silicon strain layer under goes ion injection, then the strain layer structure becomes non-crystalline. This is because the high energy ions injected into the crystal collide with the silicon and germanium atoms of the crystal lattice and cause a shift of the points, thus destroying the original crystalline lattice structure. Also, modern light information storage technology uses high intensity (as much as 10^6 w.ch⁻²) laser to cause the crystals on the semiconductor laser disk material to go into a

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molten state where the laser line hits them. When the light is gone, these places can become noncrystalline through rapid cooling. If they are once more shone upon with a wide pulse low energy laser, the non crystalline structure can be changed back to crystalline. The examples above illustrate that under the effects of certain forms of energy, there can be shifting back and forth between solids.

From modern science, we believe that we can hypothesize that under the effect of ESP, crystals are subjected to a certain type of ESP radiation similar to that of a laser or ion injection. This type of ESP radiation is a type of matter and it has the nature of matter. It has relatively strong energy. It can effect the shifting of some lattice points, thus affecting or destroying the long term cyclical regular arrangement of the original crystalline lattice, causing the long range ordered overall monocrystal crystalline lattice change to microcrystalline. This is to say, through the effects of ESP, the monocrystalline silicone is caused to change into oriented microcrystalline. Oriented microcrystalline free energy positions are between crystalline and non-crystalline states, and are higher than those of crystals and are also a type of quasi stable state. Due to the oscillation of the crystalline lattice, after a period of time, it is caused to revert back to its original state. This is the relaxation process. In this manner, it changes from a quasistable oriented microcrystal to a more stable monocrystal.

Looking at current experiments and the attempts in the discussion above, we still know too little about the effects of ESP of crystalline structures. In order to further study this, a great deal of work has yet to be done. First of all, it will require the capture of even more positive examples and detailed examination of the relevant phenomena, including the use of different instruments to analyze the test samples and having the experiments repeated by different persons with ESP abilities. This is especially so because the changes are not permanent. In addition, follow up experiments can help us understand the patterns of some of the changes, and the follow ups should start quickly and the intervals between the follow up experiments should be shortened, repeating the effects on the objects in which changes have been generated, to test whether or not permanent changes can be generated. This is very significant work. Because it provides convincing evidence for whether or not ESP can affect crystalline structures. Finally, there should be ion injection and laser simulation experiments conducted with the results compared to those of ESP experiments. This would be of positive significance in clarifying the questions.

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OBSERVATION OF THE ABILITY OF BREAKING THROUGH SPACIAL BARRIERS
USING ESPECIALLY LARGE RECEPTICALS

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(Institute of Space Medicine Engineering, Beijing)

SUBJECT WITH ESP: Zhang Baosheng

A wooden cabinet 120 by 180 by 60 centimeters was used as a sealed container. Sheets of papers and boards with one-of-a-kind markings were used as the target objects and placed inside the cabinet on the upper shelf. Without damaging the cabinet or opening the door, the person with ESP was able to remove the target objects and also was able put them back inside. This demonstrates that even when using especially large container it is possible to completely break through spacial barriers, however, the success rate was much lower and was exceptionally difficult.

FORWARD

The ESP ability to break through spacial barriers has already been demonstrated objectively by science using a container with dimensions of a dozen or so centimeters long^{1,2}. However, will this work with even larger containers? Is there a limit to the size of the container? The goal of this experiment was to explore the limits of this ability.

METHODS OF THE EXPERIMENT

The experiment apparatus was an ordinary vertical cabinet 1.8 meters high, 1.2 meters wide and 0.6 meters deep.

Illustration one shows the experiment cabinet (vertical cabinet A) used in the 1988 experiment. At the top of the cabinet there is a transparent plexiglass shelf. It is sealed on top, bottom, left and right. It can be opened from the front or rear to place the target objects inside. At the bottom of the cabinet was a low light video camera aimed directly at the top of the cabinet. Also, it was held in place with a two centimeter thick plate. After the doors were closed, they were sealed with a built in lock.

Illustration two shows the experiment cabinet (vertical cabinet B) used in the 1989 experiment. The video camera was held in place in the upper left hand corder of the cabinet by a two centimeter thick plate. By use of a mirror it was possible to photograph objects in the bottom of the cabinet. After the doors were closed, three methods were used to ensure they were sealed. First, three metal wires or conductor wires were fastened to the right door and went through the shelf inside and then tied securely to the left door. Second, a nail was driven through the frame of the right door into the vertical frame member of the cabinet ten

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centimeters from the bottom, thus securing the right door. Third, two built in locks.

After the door was closed, the widest gap at the hinges was no more than 1.5 mm.

The experiment in 1988 did not use a low light video camera, and only used external taping. The goal was first to ensure that experimental results could be obtained, and to do our best to prevent any possible interference from a low light camera.

In the 1989 experiment, we began using a low light video taping from inside the cabinet.

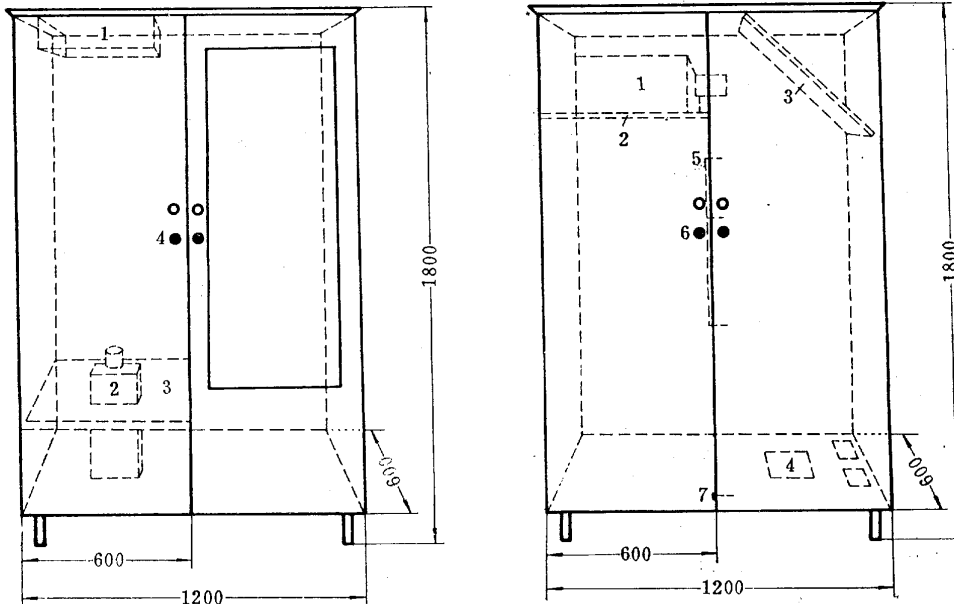


ILLUSTRATION ONE

EXPERIMENT CABINET (A)

EXPERIMENT CABINET (B)

1. Target object separator
2. Low light video camera
3. Holding plate
4. Built in locks

1. Low light video camera
2. Separation plate
3. Mirror
4. Target objects.
5. Sealing conductor wire
6. Built in locks
7. Sealing nail

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Prior to each experiment we always directly opened the door or used low light observation methods to check the the objects inside the cabinet and the cabinet was sealed. We always videotaped these checks in order to have video records and for verification. After the seal was ascertained, the experiment personnel did not leave the site of the experiment until the experiment had begun. From the time the experiment begun there was continuous video taping.

In all we conducted experiments on 21 days.

For any experiment to be deemed a success, the following standards had to be met.

1. The cabinet had to be checked prior to the experiment to determine the test objects were inside.

2. After the experiment cabinet was checked, there were always experiment personnel at the scene, and there was a continuous video taping from the beginning of the experiment on.

3. There were one-of-a-kind marks on the target objects. The thickness of the target object had to exceed two millimeters.

The person with ESP was Comrade Zhang Baosheng.

RESULTS OF THE EXPERIMENT

For the general results of the experiment, see table one. From this table we can see that of the 21 experiments, seven were successful, eight were not successful, and six were doubtful.

So-called doubtful results include the following situation:

1. Prior to the formal experiment, there was no time to check and make a video of the objects inside the experiment cabinet, therefore it is impossible to determine whether or not the test objects had actually been moved into or out of the cabinet.

2. Prior to the experiment the contents of the experiment cabinet were checked and video taped, and there was a video record. Control of the experiment cabinet was not lost. However, there were movements of flashes or shadows across the low light images, and it was impossible to determine if it was a light phenomenon of the ESP itself or movement of the doors.

In summary, when it was impossible to determine the veracity in these cases, and it was also not possible to determine that they were failures, they were all called doubtful.

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As for manifestations of ESP but without success, these were all called failures.

From table one we can see that the person with ESP could move the test objects into the cabinet as well as out of the cabinet.

The heaviest test object was the wooden block moved into the cabinet on 23 March of 1988. It weighted 85.27 grams and was 3.5 by 4.8 by 8.2 centimeters. The test object with the largest area was the 16 Kai "mission document" moved out on 30 March of 1988. On this document, ten people had signed their names in ten different colors. The interesting thing was that the person with ESP did not move it out all on one occasion but first moved out one page, and then moved out the cover, see illustrations one and two on cover three (translator's note: unavailable).

On 23 March, 1987, the ESP manifestations were the strongest. The experiment personnel entered the laboratory at 0:800 in the morning, checked the state of the experiment cabinet and videotaped. They placed a "Technical Document Registration Form" on which had been handwritten "Zhang Baosheng, 1988.3.4) and a piece of three layer plywood in the plexiglass isolation box at the top of the cabinet. They closed the doors and locked the cabinet. After the person with ESP arrived at the laboratory, they took continuous video tapes. First the registration form was removed and then the piece of plywood was removed. The average person would find this unimaginable. Illustrations three and five on cover three (translator's note: unavailable) are photographs of this registration form.

Illustration four of cover three (unavailable) is a photograph of the piece of three layer plywood.

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1 日期	2 成功	3 不成功	4 可疑	5 录像
88. 3. 16		3 不成功		
3. 18			4 可疑	
3. 21	8 移入3mm厚纸板			外部录像 6
3. 23	9 移出纸一张			外部录像 6
	10 移出三合板,重38.71克			
	11 移入木块重85.27克			
	12 移入三合板,重44.97克			外部录像 6
3. 28	13 移入三合板二块			外部录像 6
3. 30	14 移出委托书一份			外部录像 6
4. 8	15 移入三合板			
4. 11	16 移出共产党员杂志一本			
4. 13			4 可疑	
4. 18			4 可疑	
4. 20		3 不成功		
4. 22		3 不成功		
4. 25		3 不成功		
4. 27		3 不成功		
4. 29			4 可疑	
89. 7. 5		3 不成功		
7. 12	17 移入计算器			微光录像 7
7. 21		3 不成功		
7. 25		3 不成功		
12. 18			4 可疑	
12. 23			4 可疑	
	(18) 7次	(17) 8次	(20) 6次	

TABLE ONE: RESULTS OF MOVING TARGET OBJECTS INTO OR OUT OF THE CABINET

1. Date. 2. Success. 3. Failure. 4. Questionable. 5. Video record. 6. External taping. 7. Low light video taping. 8. Moved in a 3 mm thick piece of cardboard. 9. Moved out a sheet of paper. 10. Moved out a piece of three ply plywood, weighing 38.71 grams. 11. Moved in a wooden block weighing 85.27 grams. 12. Moved in a piece of three ply plywood weighing 44.97 grams. 13. Moved in two pieces of three ply plywood. 14. Moved out a document. 15. Moved in a piece of three ply plywood. 16. moved out a copy of Communist Party Member Magazine. 17. Moved in a calculator.

The results of the experiments conducted on 13 April, 1988 were listed as questionable. This is because as of 10:00 in the morning none of the test objects could be moved out of the cabinet, and it was decided to end the experiment, so the experiment personnel and the person with ESP left the lab. After returning to the lab at 11:00, the person with ESP suddenly removed the objects from the cabinet. Since the objects in the cabinet had not been checked prior to their being moved out, the results cannot be deemed positive, and were listed as questionable.

On 05 July, 1989, the person with ESP attempted to move the target objects out from the bottom of the cabinet. Four attempts were

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unsuccessful. After each attempt, his hands and forehead were covered with sweat. He would wipe off the sweat and try again, and immediately break out in sweat again. This is typical of unsuccessful examples.

In addition, looking at the overall results of the experiment, the success rate was very low, with a success rate of only one out of every three times there were manifestation of ESP. This does not include the times the person with ESP came to the lab and subjectively felt that he could not do it and was not willing to try, or there was no manifestation of ESP.

DISCUSSION

1. The reality of this ability.

In any experiment listed as successful, prior to the experiment the objects in the cabinet were checked. Thereafter, control of the cabinet was maintained, and there was a continuous external video tape. The person with ESP could not possibly directly open the doors of the experiment cabinet. Furthermore, most of the target objects moved out of the cabinet were in the isolation box at the top of the cabinet, and most of the test objects moved inside ended up on top of the plate holding the low light video camera. This could not be accomplished by ordinary conventional methods, only by extremely unconventional ESP ability.

2. Analysis of the reason for the low success rate.

The success rate for moving target objects out of or into a large container is much lower than the success rate for similar experiments like removing pills from a glass medicine bottle. This indicates that the process of this ability is actually relatively difficult. At times his arms would be covered with sweat and he still could not succeed. It is very possible that for Zhang Baosheng, breaking through spacial barriers with a container volume in the cubic meters approaches the limit of his abilities. The person with ESP also had this feeling, many times saying that he could not accomplish this. The above stated positive results were only accomplished when the persons with ESP was in an exceptional ESP state.

MISCELLANEOUS

From our observation of 21 attempts to move target objects out of or into the cubic meter size large container, we demonstrated that people with ESP do indeed have this ability. However, the success rate is very low, and it is very difficult. It is possible that it approaches the limits of the abilities of persons with ESP.

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EXPERIMENTAL RESEARCH IN MAGNETIC FIELDS OF THE HUMAN BODY

BY: Wu Qiyao (Beijing College of Science and Engineering)

In recent years, research into the physical properties of human body fields has created an extreme amount of interest in China's science and technical fields. Many research units have detected, from various different scientific angles, paranormal physical effects of ESP states. This article only addresses the problem of the magnetic field of the human body, and discusses this in combination with what we have learned from scientific experimental research.

Since 1980, people have observed that a person with ESP, Yu X X could use the bottom of his lips or his fingers near the surface of the water to attract a magnetic embroidery needle. People also used highly sensitive magnetic probe, the Japanese TR4100 frequency spectrum instrument system to detect a 0.2 gauss magnetic field. Later, there have been a number of units in China which have used various magnetic intensity devices and magnetic measurement methods to measure changes in the magnetic fields when QIGONG masters were releasing an "external QI" and under states of ESP. We have also used many times simple magnetic field measuring equipment such as the CT-3 gauss meter, the HST-1 milliteslar meter, measuring 0.1 to around two gauss changes in magnetic fields. In the 1st year, there have also measurements of 0.001 oersted intensity magnetic fields during ESP states by such units as the State Seismology Bureau, the China Geology University and the Xian Electronics Science and Technical University (including the 212 Institute of the Ministry of Machinery and Electronics) while doing everything possible to screen out interference by the Earth's magnetism. We can see from this that many units have measured and demonstrated the existence of paranormal magnetic fields of ESP states. However, at the same time, a number of questions have been raised: (1), Why are there large deviations among the results measured by the various units, and why are there some units who got no readings at all? (2), Is there any difference between the paranormal magnetic field manifest during states of ESP and the biomagnetism of medical research. Why does the magnetic intensity level increase several times under states of ESP? (3), Can the magnetism measurement methods of classical physics be used to directly measure the magnetic field of the human body, and are there any false readings in the measurement results? Focussing on these questions we made the following investigations.

I. Currently, various units in China have conducted measurements of human body magnetic fields. The instruments and methods used can generally be divided into three categories. There are differences in the orders of magnitude in the results of the measurements. These are mainly caused by differences in the testing principles, methods and equipment (the individual variations caused by different test subjects will not be discussed here).

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(1). Using a Hall effector probe to test magnetic fields. This includes the use of magnetic sensitive semiconductor elements and the CT-3 Gauss meter. The HST-1 milliteslar meter also belongs to this category. This category of instruments, because their sensitivity is low, are easily influenced by environmental factors, and it is easy to generate false readings when measuring weak magnetic fields of the human body. This is especially so because ESP can cause changes in the physical properties of some materials (this has already been demonstrated by several experiments) and these changes are difficult to eliminate. Because at times the reading of the instrument may be generated by changes in the physical properties of the instrument itself. In addition, various units (including ourselves) use the total results measured by this category of instruments. All the readings were taken without any screening of the strong earth magnetic interference. Therefore, they cannot be taken as scientific evidence, and can only be considered as observations of phenomena.

(2). The use of the principle of the magnetic reactions to measure magnetic fields. This principally uses wire loops of 10,000 windings or more connected to an extremely highly sensitive galvanometer to measure magnetic fields. The Beijing Science and Engineering College, the Engineering Institute of Space Medicine and the Xian Electronics Science and Technology College all conducted this type of tests. We have measured changes of $\pm 3 \times 10^{-8}$ coulomb when QIGONG master X X suddenly released his external Qi. Because (1), this method used the principle of adjusting the location of the windings and the fact that the windings only react to changes in the magnetic field to screen out magnetic field interference, they cannot actually effectively eliminate strong environmental interference. (2), There are few examples of successfully using this method. Because of this, this method is not an effective method for measuring the weak magnetic fields of the human body.

(3). Testing using magnetic screen technology and highly sensitive magnetometers. The magnetic fields of the human body are extremely weak, and compared with the magnetism of the earth, they are only at a level of 10^{-9} to 10^{-5} . Even if this magnetic field is enhanced by several orders of magnitude by ESP to a paranormal level, it still is much weaker than the earth's magnetism. Anyway, in addition to the magnetism of the earth, there is also magnetic interference caused by the universe and ionosphere (including magnetic storms) as well as the man made electromagnetic interference in the cities. The level of this interference can be as much as around 10^{-3} , more than two orders of magnitude higher than the magnetic field of the normal person. Because of this, to effectively measure, every effort should be made to achieve excellent magnetic screening, and highly sensitive magnetism measurement equipment should be used. Some units in China have done a bit of work toward achieving this.

1. The State Seismology Bureau Office of Geophysics and the Engineering Institute of Space Medicine have cooperated, using the national zero magnetism space experimental laboratory (screening

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effectiveness can reach $< 2 \times 10^{-4}$ oersteds). They have used CHO-1 Model Millioersted meters to measure magnetic fields (sensitivity can be as much as 10^{-5} oersteds, with a frequency response of DC-10Hz) to measure human body magnetic fields of persons with ESP at as much as $(2 \text{ to } 6) \times 10^{-2}$ oersteds. The pulse peak reached 1.3 oersteds. This experiment was very scientific, but there were still some interference factors which were not fully taken into consideration.

2. The China Geological College (in Wuhan) used a six layered alloy magnetic screening cylinder to screen out strong magnetic field interference and used a CHO-1 model millioersted meter to measure human magnetic fields. The reading for the intensity of the magnetic field for X X X who has ESP abilities was $(1 \text{ to } 3) \times 10^{-3}$ oersteds, and instantaneous peaks reached $(2 \text{ to } 4) \times 10^{-3}$ oersteds. The effectiveness of this method of magnetic screening is limited.

3. The Xian Electronics Science and Technology College and the 212 Institute of the Ministry of Machinery and Electronics used a 0.2×10^{-5} oersted SDM-A model digital magnetometer, using the calibrating equipment of the instrument itself, they adjusted the magnetic influence to zero, and measured the intensity of someone with ESP at $> 4.9 \times 10^{-4}$ oersted, which was the clonic pulse state. Although this experiment could limit the influences of the earth's magnetism, its effectiveness was limited, especially because it had no screening capability against space and man-made electromagnetic random interference. Therefore, its results cannot completely eliminate outside magnetic interference.

II. Discussion of the mechanism by which human body magnetic fields are generated.

For the ordinary state of the human body, there are no more than three factors in the generation of the magnetic field. (1). The various biological activities of the human body may generate such bioelectrical activity as electron transmission, ion transfer and nervous electrical activity, thus causing biological currents with different frequencies, amplitudes and wave forms, and the accompanying generation of weak biological magnetic fields. (2). The materials of which the living tissue of the human body is composed has a certain magnetism, and under the influence of the earth's magnetism and other outside magnetic fields, can generate induced magnetism. (3). Through the air or the food, certain magnetic substances can be introduced into the lungs or digestive organs of the human body and its tissues. The overall intensity of the magnetic field composed of these factors is generally in the order of magnitude of 10^{-5} oersted, much lower than the earth's magnetic field and outside interference magnetic fields.

Even though there are wide deviations in the results of the experiments, research and testing results of units in China, and there are a number of theories about this, in a state of ESP, there is a fairly stable, much higher magnetic field reaction, so it seems these are total

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of too great a significance. As for why the intensity of the magnetic field is increased by two or three levels of magnitude by the ESP state, this clearly cannot be explained by the principles of the generation of the conventional biological magnetic fields. There have been those in China who have proposed that under a state of ESP, the human body generates a "biological self-excited magnetic field", holding that the characteristics of this sort of magnetic field would be "pulse, gradual advancement, instantaneous high intensity, and no fixed cycle". Whether or not this theory can be established must await experimental demonstration.

In summary, I believe: The intensified magnetic field effect of the state of ESP does exist, but research into the magnetic fields of the human body, from the mechanisms to the methods of measurement, all require further exploration, research, and improvement.

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PRELIMINARY INVESTIGATION OF IMPLICIT SPACE AND IMPLICIT MATTER

BY: Shao Guangda, Huang Yawei and Yan Lin
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Somatic science has a history in China of more than ten years now. Modern physics has been unable to explain the physical phenomena of ESP experiments. The evidence obtained in ESP experiments is a serious challenge to modern physics. There is a scientific revolution waiting to be born. China's famous scientist, Qian Xuesen has pointed out: Research in somatic science may lead to a scientific revolution in the 21st century, perhaps an even greater revolution than the quantum mechanics and theory of relativity of the 20th century. It may even lead to a second Renaissance!

The many exciting results of ESP experiments have informed us that there may exist in the universe a world of implicit space and implicit matter. Because they have certain properties, for a long time they have not been known or understood by man. It is just like man once only knew about "visible light", and did not know that on either side of the range of "visible" light there were also invisible electromagnetic wave frequency spectrums. He only knew the sounds within the range of 16 to 2,000 hertz which could be heard by the human ear, and did not know that there were ultrasonic waves and subsonic waves on either side of the sounds he could hear. It was only with the development of modern science and technology with its modern scientific instruments to expand his sense of "sight", that he could truly understand them.

Then, what are implicit space and implicit sound? What paranormal properties do they have? Below we make some inquiries around this questions.

THE OBJECTIVE EXISTENCE OF IMPLICIT SPACE AND IMPLICIT MATTER

Actually speaking, implicit matter should be called the hidden state of matter, and corresponding solid matter should be called the explicit state of matter. Somatic state research is established on the basis of facts and scientific experiments. For a number of years, in a number of PK and extraction of solid objects, implicit space and implicit matter has always been curling up all around us.

In letter transfer experiments, it is required that the letter be removed from a sealed envelope. Ordinarily, when the letter is moved out, the letter is placed on top of the envelope, and the envelope is still intact. In our tests, we have come across this sort of situation, where the letter was moved out into space, and the monitors could not see the letter. Later this letter had flown into another room, or flown into a

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certain mail box, or had flown into a thermos bottle. During this flight in space, the letter was in an implicit state.

In solid objection extraction experiments, the subject is able to extract from one to several cigarettes from a pack of cigarettes placed in any location of a room and have the cigarettes enter a container in the subject's hand. The subject can extract cigarettes from a full pack in a room several rooms away and bring them to his hand. When the object to be extracted is placed in a cardboard box and then placed in a wooden cabinet, or is sealed in a metal box and then placed in a cabinet or sealed in a cardboard box and placed in a metal cylinder, and the metal cylinder is placed in a large ceramic jar, and finally the jar is placed in a cabinet, the subject can still remove the object to his own hands without reaching in and touching it. These objects, while in flight, are implicit.

This reminds us of the so-called poltergeist phenomenon. Actually it is uncontrolled PK phenomena, such as in a certain room there a pot or a pan or a dish or spoon will fall down in the middle of the room, and before falling down, these objects were implicit.

Modern physics has particles and anti-particles, matter and anti-matter. Could there be a connection between this and the explicit and implicit matter. As we have stated above, it is not difficult to know that it is possible that there is implicit space which coexists with the universe space of which we are aware.

THE EXPLICIT STATE AND IMPLICIT STATES OF MATTER ARE INTERCHANGEABLE UNDER EXCITATION BY ESP

Under excitation by ESP, the explicit and implicit states of matter are interchangeable. This has already been demonstrated by many experiments. In a letter transfer experiment conducted in a bedroom, Little Hong transferred a letter with written contents out of a sealed envelope. Eight minutes later she said the letter had already flown out. The monitors checked the envelope and the letter was actually missing from the envelope. This demonstrates that under the excitation of ESP, the material object which was the letter had already switched from the "explicit state" to the "implicit state". When Little Hong said that the letter was inside the folds of the blanket on the bed, the monitors immediately looked, they opened up the entire blanket, and did not see the letter. The monitors folded the blanket and put it back where it was. At this time, another subject, Little Ping, said the letter was really in the folds of the blanket. They went up and lifted up the blanket, and there was the letter. This process indicates that the first time they checked the blanket, it was not that the letter was not in the blanket, but it was that the letter was still in the implicit state and could not be seen by ordinary people. However, from the time when the blanket was refolded and placed back where it had been until it was checked the second time, the letter had switched back to the explicit state, so that we were able to

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see it. As we can see, there were two obvious transition processes the letter underwent: The explicit state was excited and it was transformed to the implicit state, and from the implicit state it was excited and transformed to the explicit state. Furthermore, the letter remained in the implicit state for a period of time.

In one cigarette extraction from a solid object experiment, the cigarettes excited into space were six Beijing brand cigarettes. At that time the subject was only able to catch two, and the other four remained in the implicit state. One month later, he went to the same place for an experiment, and caught two more Beijing cigarettes. There were still two more Beijing cigarettes which to this day remain in an implicit state, and without a certain excitation, these two Beijing cigarettes will never return to their explicit state.

In addition, in the examples of reports of UFO's about which people are so concerned, there have been mention of unidentified flying objects which are sometimes there and sometimes gone. We believe that it these are the same type of thing.

OBJECTS IN AN IMPLICIT STATE HAVE THE SAME INTEGRITY AS IN THE EXPLICIT STATE

On one occasion, we tied 20 cigarettes up with a string, and sealed them up in a cigarette box. During the experiment, the subject did not know how the test objects were sealed up. In this experiment, the subject extracted not just one cigarette, but a string of 20 cigarettes all together.

From the records of many experiments, no matter what object is extracted, when it is in an implicit state, what the subject "sees" is always a complete shape, and it never breaks up. Nothing more than changes in size over time and the edges become blurred. For example, the subject "sees" the letter as a flat piece of white light, "sees" a cigarettes as a short thick white light, or a beam of long white light. She "sees" an aura the same color as the flower hanging over the flower. This type of "light" and "color" cannot be seen by ordinary people. Objects which have returned to the explicit state from the implicit state have all been the original object. We have never detected an extracted piece of paper or cigarette which became half a sheet of paper of half a cigarette.

OBJECTS IN AN IMPLICIT STATE POSSESS THE SAME PROPERTIES AND EFFECTS AS OBJECTS IN AN EXPLICIT STATE

Every object must have its own properties and effects such as a knife can cut off branches and a hammer can beat on things. Experiments have demonstrated that when they are in an implicit state, they similarly possess the same capabilities and effects.

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Little Yun has excellent abilities to pluck flowers from a distance. She has been tested on this flower plucking ability many times at the unit hospital, the Prefecture Hospital, the Prefecture Peoples Congress, the Prefecture CPPCC and at schools, all with success. However, there was a period of time when she came to tell her teacher that she could not do it any more. They she happened to see her father shaving, and she thought, why not use a knife on the flowers. The result was that she succeeded. The flowers were inspected, and it was discovered that the flower stems showed signs of having been cut with a knife.

After many tests of having Little Ping recognize block characters, we discovered that any test item she had recognized, the characters all showed signs of being cut with a knife, and some characters had even been cut out. For example, one test item contained the words "five, talk, four, beautiful, three, hot, love". We stacked them up and placed them behind a picture on the wall. After she had recognized them, she said that the word "three" had been dug out, and this block of the character "three" flew into Little Ping's hand. Even characters written on cardboard were dug out after she had finished recognizing them. We asked her why this was the case, and she said that in every test she saw a knife before her eyes, and it was this knife that cut up the characters.

UNDER THE EXCITATION OF ESP, MATTER CAN BREAK THROUGH SPACIAL BARRIERS

In ESP experiments, solid objects, under the excitation of ESP, can move into and move out of sealed containers. We discovered that when these objects were breaking through spacial barriers, it was extremely easy when in the implicit state. For implicit matter "flying" through space, it is if barriers do not exist. It can pass through any visible object such as walls, metal plates, wood boards, and plexiglass, freely moving in and out and back and forth. Furthermore, we discovered that when implicit matter is in motion it is vibrating and it has a certain oscillation frequency. During one extraction experiment, the subject, Little Hong, held in her hand a transparent plastic box, and when the cigarette came, it was immediately encased in the box, and the cigarette was standing in the box vibrating and giving off a humming noise.

In an extraction experiment in May of 1989, a cigarette went into Little Chun's clothing and the humming cigarette ran around in her clothing like a little fish, and did not stop for quite a while.

This illustrates that when matter is excited to an implicit state, it vibrates and moves at a certain frequency. In an implicit state, it passes through any obstacle with extreme ease. Furthermore, it only takes a minimum of time, or tends toward no time at all. In reports of UFO phenomenon, flying saucers are seen on different sides of the earth at the same time. Using this property, it is relatively easily explained.

MOVEMENT OF IMPLICIT MATTER IS SUSTAINED AND INSTANTANEOUS

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The flight in space of implicit matter may not be restricted by time. From the results of experiments, there are two aspects to this as follow: One is that under excitation by ESP, after matter enters an implicit state from an explicit state, the intended event can be completed in an instant. On the other hand, at times it has corresponding stability and continuity, and it takes a certain length of time to complete a process. Therefore, motion of implicit matter is controlled by the effects of ESP, is selective, and is not seriously restricted by time.

These viewpoints are very naive, and they are presented for reference for others with common interests.

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THEORIES OF PSI

BY: Xiong Zhehong

THE MONISTIC THEORIES OF PSI

IDEALISM

Modern science operates under the direction of materialist theories. Materialism holds that either the soul does not exist or it is a phenomenon connected to the brain. Under the latter conditions, the soul is caused by the brain, but it cannot influence the brain. However, because sensation itself is not physical, so it is very difficult to gain support for hypothesizing the existence of matter and the material universe based on this stance. In addition, empirical evidence indicates that PSI is not constrained by factors of space, time or physical cause and effect, and the soul can cause a direct effect on matter.

ELECTROMAGNETIC WAVES

Julian Ochorowicz hypothesized that the soul reaction phenomenon is the result of effects caused by electromagnetic waves. This type of electromagnetic wave is generated by the sender's brain and is received by the sensor's brain. In 1929, Austrian Clinical Psychologist Hans Berger used brain photography techniques he invented to discover brain waves. However, because these brain waves cannot be detected more than a few millimeters from the brain, he proposed that the psychic response was done over (psychical waves).

Russian Engineer Ippolite Kogan postulated that extrasensory perception was carried over extremely low frequencies. Michael Persinger also believed that extremely low frequencies were used in PK and in ESP. These type of waves encircle the earth, and even if they were not emitted by the brain, they were used to generate paranormal phenomenon by altering the electrical potential of the brain. Extremely low frequencies cannot be stopped with a "Faraday cage". They completely encircle the earth. The intensity of the waves almost does not diminish. In this way, their use in the role of a medium for PSI is consistent with the fact that the Faraday cage and distance are not obstacles.

The brain activity of the sender could be transformed into electromagnetic waves, and these electromagnetic waves could also be transformed into the sensor's brain activity. This is theoretically possible. In this manner, psychic perception could be explained. However, how could electromagnetic waves explain clairvoyance or precognition. This is a problem.

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BASIC PARTICLES

Several physical or quasiphysical basic particles are believed to be used as mediums for PSI. German theoretician Forel proposed that ESP was transmitted over the medium of electrons. This type of electron medium is transmitted from the brain of the sender of the extrasensorily perceived object to the brain of the sender. American Engineer A. L. Hammond hypothesized that neutrinos were the carriers for PSI. Neutrinos travel at the speed of light, and can pass through objects on earth as if they were empty space. Swiss Engineer Haakon Forwald believed that PK might be accomplished through neutrons, but even more possible was that PK was that the psychic of the sender used the earth's center of gravity - possibly gravitons - to affect the objects. Andrija Puharich advocated that PSI was accomplished by the carrying of information on protons. The hypotheses that ESP uses basic particles which have relative matter penetrating power as a medium avoids the various difficulties of the electromagnetic wave theory explanation in explaining why physical barriers do not stop ESP. However, how can basic particles which can penetrate matter be stopped by the brain of the sensor. People are not too clear on this.

ANTIMATTER

American theoretician J. C. Russell hypothesized that antimatter is actual solid matter, and it may explain PSI. This is because when people are released from the restrictions of matter, it can generate psychic perception, long range version, precognition, PK, dematerialization and floating, and might also generate apparitions. However, antimatter only appears and exists at the instant it comes into contact with matter, because they always destroy each other when they come into contact. This fact presents serious difficulties for this hypothesis.

BIOPLASMA

An integrated energy network composed of a mixture of electrons and photons is called bioplasma. This was proposed by Soviet physicist Victor Inyushin as something similar to organism energy. He believed that bioplasma definitely has an organic structure even though it can exist outside of the realm of organic material. Genady Sergeyev of the Leningrad Institute of Biology has hypothesized that under certain conditions bioplasma can lead to PK. Rogo believes that it could be the basis for materialization. It is also believed to be the medium for the occurrence of ESP (or as the Soviets call it biological communications). We must remember that the existence of bioplasma is still in doubt and its role in PSI has not yet been systematically described, so it is impossible to ensure strict investigative reliability.

COMPREHENSIVE PATTERN OF DIFFRACTION

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"Holographic
Universe"

London University Physicist David Bohm has proposed a hypothesis that the entire universe is a comprehensive pattern of diffraction. This comprehensive pattern of diffraction is a three dimensional pattern formed by wave interference models. The entire pattern can also be reconstructed from any portion of the overall pattern of diffraction. If the universe is a comprehensive pattern of diffraction, then its entire body of information can be contained in any portion. Stanford University Neurologist Karl Pribram believes that the individual's brain is one point on the universe comprehensive pattern of diffraction. The brain has a channel to all the information included in the comprehensive pattern of diffraction. In this way, during PSI states, there is no problem in information transmission because this information is already everywhere. However, even if the comprehensive pattern of diffraction of an object is three dimensional, it is only an empty pattern. It would at the most include information of reflective errors on the outermost surface of the object and would not provide information on the inside of the object. Therefore, the hypothesis of a comprehensive pattern of diffraction only provides a type of relative theory and does not provide physical practicality.

STANDING WAVE

Soviet Scientists Dubrov and Puskin believe that thought and images are standing waves produced by the brain. They are like the standing wave generated by shining light on hologram negatives. Standing waves appear in their latent forms at every point in the universe at the same time. The interaction between the standing waves generated by the brain and photographic film can explain psychical photography. Furthermore, different wave activity processes in the brain can be viewed as processes in a brain with the same structure. These wave activity processes can directly interact and lead to the generation of ESP. However, currently, the generation of standing waves by the brain is only hypothetical, and their existence has not yet been proven.

RESONANCE

Ninian Marshall has proposed the hypothesis that two kinds of complex structures with a relative degree of complexity and similarity such as two people's brains, can influence each other, through direct vibration or resonance. This theory, in addition to lacking evidence for resonance, also cannot explain such ESP manifestations as in choosing simple objects such as calling a card.

British Zoologist Rupert Sheldrake has proposed a theory that organisms have a type of form generating that causes growing plants and animals to attain their form. Through form resonance or harmony, it produces the past or present form of members of the family and species. Several experiments used to check out this theory have already produced initial results. These experiments use a comparison of the difficulty of learning or sensing through ESP what someone else is familiar with and

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learning or sensing new material. However, they can be explained by using supernatural influences commonly believed. In addition, form generating fields and their properties have not yet been appropriately explained.

THE DUALISTIC THEORIES OF PSI

THE THEORY OF PARALLEL BODY AND MIND

One dualistic explanation of the relationship between the spiritual and the material is the theory of parallelism. The relationship between the spiritual and the material is one of predestinate harmony or predetermined synchronism. There is no interaction between the two, but they are in concert with one another. This is their natural property.

LIFELESS SPIRIT

The German Philosopher Laibunizi (translator's note: phonetic) proposed a theory that the universe is composed of unitons and that each one of these unitons was conscious of the universe. He hypothesized that matter, even lifeless matter all had consciousness, and in modern scientific technical terms, has ESP. According to this theory, this type of consciousness should belong to the category of spiritual and material parallelism and spiritual and material predetermined synchronism, and not the product of interaction between the spiritual and the material.

There are several similar theories such as Cleve Backster's proposed theory of primordial consciousness. This theory holds that ESP can appear in both living organisms and lifeless material, and can be traced down to the subatomic levels. On the other hand, it is also possible that PSI only appears in bodies composed of integral organic elements such as cells, an organism, a family or tribe or an international society or religious group. Actually, PSI can occur in any element of a portion of any organic structure. For example, during PSI experiments when PSI appears in people taking part in the experiment, the persons become voluntary functional units.

NON CAUSALITY

Austrian Biologist Paul Kammerer expressed this idea of his as an expression of the nature of a principle of the universe. He calls it seriality. It operates independently from the causality of physics to coordinate similar events. If this principle exists, then it can explain certain paranormal phenomena.

Carl Jung believed that paranormal events were certain significant coincidences. This type of coincidence was based on the existence in the universe of non causal orders. He called this type of order synchronism. To use an example to explain synchronism, he related an event. There was a woman who told him about a dream she had about a scarab type bug. In the process of relating the dream, a similar beetle appeared on his window

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other duality models.

PSYCHOLOGICAL AND PHYSIOLOGICAL SYMPATHY

This theory holds that the spiritual can affect the material, and conversely, can be affected by the material. In the modern age, there are many more PSI scholars who accept this type of duality theory than accept other mind and matter theories.

THE SIXTH SENSE

Meyers pointed out that paranormal information is delivered to a body through a non specialized and heretofore undiscovered sixth sense. This sixth sense can only enter the realm of consciousness through a specialized sense organ. Although scientists have not yet discovered the sensual organ for this sense, it may exist in the brain.

CONTROL THEORY MODEL

The explanatory models for the PSI transmission system are: The individual uses ESP to obtain information in the surrounding environment, and depending on his wishes or requirement, he uses PK to generate an effect. The psychic feedback of the PK behavior causes organisms to be able to direct its behavior according to the information it receives. This type of model for perception is psychobiological. When using feedback to coordinate behavior, it is a control theory. This model of Stanford's is: The PSI model instrument reaction (PMIR) because organisms gain information using ESP as a tool, and use PK as a tool to influence it. Because he proposed the conforming behavior theory, he has refuted the PSI control theory explanatory model.

PSI FIELD THEORY

The English Mathematician Gerhard Wassermann believes that field transmission of information is achieved by a hypothetical relatively tiny quantum (this type of quantum cannot interact with matter). By not being gobbled up by matter, this type of PSI field quantum can radiate its energy over long distances and successively interact with a persons brain or some lifeless matter. Information is transmitted in this manner. In order to explain precognition, he proposes a hypothesis. This holds that these quantum fields replicate themselves, and these replicas change even faster than their prototypes, thus receiving information concerning what is about to happen concerning the prototype field. When evaluating this hypothesis, one must remember that microquantum and behavioral fields are hypothetical ideas, and their existence has not yet been proven.

William Roll hypothesized that every object, whether alive or lifeless, has a type of PSI field similar to an electromagnetic field or gravitational field. Under ESP, material or psychic events concerning the object in question are replicated in the object's PSI field. This replica

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is passed through the channel of the PSI field medium to the sensor's PSI field and interacts with the sensor's brain, thus generating psychic phenomena. In addition to transmitting information and energy to other PSI fields (this also causes PK), it also stores information and can transmit it to other PSI fields, thus acting as a memory bank. Psychometry and haunted houses are the products of interaction between the PSI field and the physical object or PSI field acting as the house's memory storage. Roll also revised the PSI field theory: an individual's PSI field and the PSI fields of the environment unite to form a PSI structure. It can allow a person to contact psychically, places he went to or persons he had met in the past. When a person dies, his individual character remains in the environment, because he and his environment form component parts of the same PSI structure.

Oxford University Psychology Fellow Sir Cyril Burt has proposed that an individual's mind is the center of an active PSI field. This field is composed of mind particles which interact with his brain. He hypothesized that an exchange of these mind particles can take place between a person's mind and another person's mind, and thus produce extrasensory perception. However, there is currently no evidence of the existence of PSI fields.

UNIVERSAL INTEGRITY THEORY

The universe is one entity and all of its parts (both material and spiritual) all depend on this idea, it is the foundation of mysticism—the central concepts and learnings of the religions of India, Buddhism, the Jewish religion, Christianity and Muslim religions, as well as the belief in astrology. Ancient astrologists believed that all events in the macroscopic world and the giant system of planets and stars were reflected in the microscopic world, which was the small world of men. This belief led to the following views of alchemy: Under the appropriate astrological influences, it was possible to turn lead into gold. Although Paranormal phenomena does not depend on mysticism or astrological explanations, it is a basic concept of mysticism and astrology and even quantum physics that the universe is a interdependent entity and this view can be used to explain PSI phenomena. Between the various parts of the indivisible entity of the universe there is no need for quantum to carry information, because in this type of universe there is no difference between "here" and "there", there is no distance to be travelled. All information and all places can be attained.

SPACIAL WARPS AND CHANNELS

G. Shimeidela (translator's note: Phonetic) proposed a hypothesis that there existed within the universe another dimension which could cause the time space continuum to overlap. It is just because of the existence of this other dimension that objects very far apart in space can form a continuum, so that there is no distance between them and information transmission does not have to travel through space. This idea helps to explain that there are no errors caused by distance in PSI. It can also

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be hypothesized that events far apart in time can form a continuum through this type of overlap. This explains the phenomenon of precognition, because there would be no information transfer over time. Toben and Wolf hypothesized channels between widely separated time and space which allowed PSI to transcend time and space. However, no one knows how to test this theory.

UNIVERSE LINES

In images of the traditional three dimensional universe, the basic particles are represented with a dot. However, in Einstein's four dimensional time and space continuum, basic particles are described as lines. In the four dimensional universe, part of this universe line represents the past positions of this particle, and the other part represents the future positions of the particle. Nash believes that these universe lines connected people's minds to events far removed in time and space, and provided a basis for PSI. Through a shift of Universe lines, within the scope of the Heisenberg uncertainty principle, information on the state of certain particles could, without the use of any energy, be transmitted to particles in the sensor's brain. Through the causal effects of the past, information on the future states of the object coils be passed on to the sensor's brain. The PK effect would also be caused by particles in the brain, which would be passed through universe lines to the particles of the external objects.

LONG RANGE EFFECT HYPOTHESIS

Einstein, Bodolysike (translator's note: phonetic) and Rosen announced an experimental idea, which was the famous EPR fallacy. In this fallacy, two members of a pair of subatomic particles stuck together such as photons or protons are separated, and then are observed. According to the theories of quantum mechanics, these two members have a certain physical state, such as spin, that would be opposite in value. It would not be known which would rotate upward and which would spin downwards until they were separated and observed. If, after separation, one of the particles were observed to be spinning in a certain direction, then the other particle would be spinning in the opposite direction, regardless of how far they were apart. This requires the transfer of information at a speed greater than that of the speed of light. Einstein used this experimental idea as the basis for opposing the theory of quantum mechanics with which he did not agree, because this theory contained the element of probability. However, since then, a number of physicists have performed laboratory experiments in order to support this theory of quantum mechanics which is in opposition to the EPR argument. Two of these were American Physicists John Clauser and Abner Shimony. They reached a conclusion: The results of the experiment must lead to one of the two following conclusions. The first conclusion is that when the spin of the first particle is observed, the spin of the second particle is determined at the same time. Under these conditions, one is forced to recognize the existence of the simultaneous long range effect. The other

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conclusion is that before the spin of the second particle is observed, it cannot be determined, and it is not real.

As Nash sees it, the first of these two possible conclusions, the long range effect, could be seen as the same thing as PSI. Following the same train of thought, the British Physicist C. N. Villars further proposed the hypothesis that the long range effect between these two particles could be used to explain extra sensory perception. One of these particles in the brain of the sensor, and the other particle would serve as the target object. He believed that a chain of interacting particles connected the different members of a pair of formerly connected microphysics particles.

OBSERVATION THEORY

As stated above, the second conclusion of Clauser and Shimony, which was that prior to being observed, the physical nature of this particle does not exist. The observation theories of PSI are consistent with this. The observation theories are based on the theories of quantum mechanics. The theories of quantum mechanics hold that a physics system (such as an atom) has countless states expanding in space, forming one called the PSI (not to be confused with the PSI of PSI theory) wave function. This particle does not exist in one of its states only, but exists simultaneously in all of its states. When the physics system is tested, or when this particle is observed, its wave function shrinks from all of the states of which it consists into a single state. It is only at this time that it exists in a certain location in space. According to the PSI observation theory, in the brain or a target object, a particle wave function, under the process of observation, shrinks into a certain state until these states are the same.

At the present time, there are several variable phase observation theories. The first was proposed by American Physicist Evan Harris Walker. He united the complex consciousness of the observer toward the physics system and several the hidden variables some quantum physicists believe cause the shrinking of the wave functions. Because the hidden variables are independent in space and time, the observer can cause the wave functions of these particles separated by time and space to shrink, thus causing their uniformity. This provides an explanation for simultaneous extrasensory perception, precognition and PK. Copenhagen University's Richard Mottuch has proposed that it is not necessary to select a hidden variable, that the consciousness of the observer will change their distribution and cause the wave functions to shrink at will. Another variable phase observation theory is that proposed by Helmut Schmidt. He hypothesized that a PSI acted to influence the probability of the occurrence of an event through a psisource. Similar to this is the hypothesis by Australian Physicists James Donald and Brian Martin of the existence of energy or negative entropy in the direction of the past that could be used in the future to alter the probability of events occurring in the present.

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There have been three criticisms of sensory observation theories. The first criticism points out that this type of theory requires that sensory feedback of the results of the effects of the psisource. However, there are no experimental results which support this point. The second criticism is that if present events are the result of future causes, it would be necessary to use retro-PK to explain the various forms of PSI. The third criticism is that if through the psisource the result precedes the cause, then this theory would fall into a cause effect loop. Quantum mechanics cause and effect loops have received the support of E. Walker, the basis for this is: once measurement is completed, all of its factors are shrunk at the same time.

Nash proposes a "extrasensory observation theory" concerning PSI. Based on this theory, the observation activity which causes the factors to shrink could be ESP. Psi activities are composed of simultaneous and indivisible ESP and PK. The theory of extrasensory observation avoids the three criticisms of sensory observation. First of all, it does not require sensory feedback of test results, because extrasensory feedback is an inherent part of this process. Second, it does not fall into the trap of cause and result loops, because PK results and ESP results occur at the same time. Third, it does not rely on retro-PK or any special form of PSI, because PSI acts independently of time and space and ESP and PK are combined into one.

BRANCHING UNIVERSES

A quantum mechanics explanation which can be considered for the problem of wave function shrinking is the explanation in quantum mechanics explanation concerning multiple worlds or branching universes. In this explanation, wave functions, in the observation process, are not shrunk from all possible states into one special state, but are cracked into their possible states, and each state appears in a different branch of the universe. Making an ordinary observation is the combining of all possible universes into a single universe (from this moment on, the observer himself also belongs to this universe). Fuojiuniya (translator's note: phonetic) Combined Industrial College Statistician Irving Good pointed out that in PSI, people with PSI abilities psychically perceive all possibilities, and then, through the selection of one of these possibilities, cause the occurrence of the desired event.

Abstracted and translated by Xiong Zhehong.

Translator's note: The author of this original article, Professor Carroll B. Nash is the former chairman of the "International Association Of Parapsychology" in the United States. He is presently chairman of the United States Yueqinfu (translator's note: phonetic) University "Parapsychology Lab".. This article is a translation of chapter 15 of his book "Parapsychology: The Science of Psiology", called "Theories of PSI". Considering the various translations used for "PSI" in China, none of

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which are very satisfactory, in my translation I kept the original English word PSI, which always refers to ESP and PK.