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(编辑部收到日期: 1989年1月12日)

STUDY OF SUPERFUNCTION OF HUMAN BODY
BY MEANS OF EXPERIMENTS AT
MICROSCOPIC LEVEL

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ABSTRACT

The experiment demonstrated that Mr. Zhang Baosheng possesses the superfunction of Human Body. He can make object penetrating obstacle. After such penetrations, the microscopic structure and properties of the object do not show any observable change.

Study of Paranormal Phenomena by Means of Experiments at
Microscopic Level (*)

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(Received: January 12, 1989)

Atomic Energy Science and Technology 24 (1), 92-95 (1990)

Abstract:

The experiment demonstrated that Mr. Zhang Baosheng possesses paranormal abilities. He can make small objects penetrate obstacles. After such penetrations, the microscopic structure and properties of the objects do not show any observable changes.

(*) From the editor: Such phenomena and paranormal abilities of human body are unimaginable for ordinary people. Nevertheless they are really true. We provide this article for reader's consideration as an example of research in somatic science.

In recent years many qigong (Chinese yoga) and related paranormal abilities have raised challenging problems to modern physics. It is important to include to the comprehensive somatic research of these phenomena the advanced tools and techniques of modern physics, including those of experimental nuclear physics [1].

The goals of this experiment are the following:

1. To look for changes in the microscopic structure and properties of the object that, as a result of psychokinesis (PK), penetrated the bottle's wall.
2. To study the mechanism of the PK-induced penetration by testing, using nuclear trace detectors, whether the macroscopic objects disintegrate during the penetration (with speed smaller than the speed of light) into nuclear size particles.

In conducting of this experiment we cooperated with Mr. Zhang Baosheng - famous because of his outstanding paranormal abilities. He is currently employed at the Institute of Space Medico-Engineering (ISME). The experiment was done on July 10, 1988 at the China Institute of Atomic Energy.

I - The Experiment

1. Recognition of characters sealed in an envelope (test of clairvoyance), and transfer of an object and written characters into the sealed envelope (test of PK).

In a sealed business envelope two pieces of polyester foil were prepared in advance. One of them was transparent, about 2mm thick. Four Chinese characters " 中华神功 " were written on it with a red, fine point permanent marker. After writing, the text was covered by a 0.5 mm thick trace detector that looks like a common red translucent foil. Both foils were taped together making the text impossible to read or even see under normal viewing conditions. The only person who knew the text and the contents of the envelope, prepared in advance, was Dr. Li. Before the experiment he did not communicate with Mr. Zhang.

After Mr. Zhang arrived, at first his clairvoyance abilities were tested by showing him the envelope. Upon presentation, Mr. Zhang gave a proper description of the content of the envelope as two rectangular pieces of foil, one of them red, held together in four corners by adhesive tape. He also said that there were 4 red characters written on the foil but he could not see them clearly. In his attempts to guess he wrote " 中华 ", " 人体神秘 ". Then, he crossed everything over. Finally he gave up saying again that he could not see clearly.

Next, Mr. Zhang folded one of the edges of the envelope, sufficiently to cover a small coin, and handed it to one of the

scientists (Dr. Chen). The latter, after ensuring that the coin is indeed in the fold and not in the envelope, held it visible to all the present. After a short pause Mr. Zhang said "O.K." and, indeed, the coin was no longer outside but inside the envelope.

After that Mr. Zhang wrote "您好" "谢谢" "你" with a ball pen on the envelope. He is known to be able to transfer characters written on an envelope into the paper that is inside the envelope. Unlike in previous tests, this time the use of polyester foils was intended to make such a transfer impossible since ball pen ink can not adhere to the type of foil that was used. Not being aware of that, Mr. Zhang announced, after a brief concentration, that the text has been transferred.

Before being cut open with scissors, the envelope was scrutinized in turns by several investigators for possible signs of tampering but none were found. The coin and the foils were retrieved from inside. The three sentences were indeed written inside. However, not on the foils but, reduced in size and not altered in shape, on the pieces of Scotch Tape holding the foils together.

2. Destruction of a watch

During the experiment Mr. Zhang expressed his wish to brake a watch. Dr. Li immediately surrendered his own for that purpose - a mass produced, mechanical watch; "Beijing" brand. Dr. Li was asked to hold the watch inside his clasped fist. Next, Mr. Zhang made a gesture as if he were picking something from Dr. Li's skin, from the back of his closed palm, between the thumb and the index finger. What Mr. Zhang picked up was a minute hand. In the same fashion he extracted also a second hand and an hour hand. This process was slow enough that all the present could clearly see the hands emerging from Dr. Li's skin. Dr. Li did not feel any pain or other sensations associated with the parts piercing his hand. It was the first documented event of an object penetrating human body in such a fashion.

"The watch's glass is broken" stated Mr. Zhang. Indeed, when Dr. Li opened his hand there was a clear gap running across the length of the glass. From the condition of the edges it appeared that the damage was inflicted by partial melting of the organic glass. All three hands were missing and there were deep scratches on the metal back of the watch, as if someone would use a file on it, but the mechanism of the watch was still ticking.

3. Test of psychokinesis involving objects penetrating obstacles

Two bottles were prepared:

(1) The bigger one, made of clear glass, was approximately 14 cm high, 11 cm in diameter. It was a standard bottle used in hospitals for transfusions of saline solution. It can be distinguished by a tight rubber plug with a long rubber skirt that folds out on the bottle's neck providing a firm and difficult to remove lid. Inside the bottle were: a pellet containing a radioactive α source (^{241}Am), an α -Fe Mössbauer

absorber, two pieces of high temperature superconductor with Josephson bridge node sample, four pieces of trace detector material, a metal sample, a small, 3cm by 1cm ampule containing a liquor sample, ten yellow and ten white medical tablets (vitamin C), and an ordinary bolt nut. A thin cotton thread was tied to the nut. The other end of the thread extended outside the bottle, between the rubber plug and glass, and was tied to the bottle's neck. The fragile superconducting samples were wrapped and sealed in several layers of the trace detector foil.

(2) The smaller bottle, measuring 8cm (height) by 5cm (diameter), was made of clear plastic and had a plastic screw-on lid. In the bottle there was a sealed pouch made of a transparent, foil-like trace detector material. From the outside the foil was practically invisible as it seemed to be part of the bottle's walls. Any objects emerging from the inside would have to pass not only through the sides of the bottle but also through the layer of the trace detector. Inside the sealed pouch in the plastic bottle there were 10 yellow tablets and 6 white tablets of vitamin C, and a tungsten sample.

During the experiment one of the investigators (Dr. Du) held the larger (glass) bottle in both hands. Mr. Zhang, without himself touching the bottle, held the investigator's wrists. After several minutes of deep concentration a white Vitamin C dropped to the table from the bottom of the bottle. Two yellow tablets followed the same way. Next, pieces of superconducting material emerged from the side wall, succeeded by already empty but still sealed plastic wrapping. In a similar fashion solid pieces of the trace detector and all the other objects were extracted from the bottle with the exception of the liquor sample, radioactive source, and the nut with the attached cotton thread.

At some point during the test Mr. Zhang apparently attempted to extract the nut from the bottle. At that time, entire length of the thread became visibly stiff. About 3 or 4 cm of the thread emerged from under the tight rubber plug before the cotton fiber lost its stiffness and Mr. Zhang gave up attempts to extract it any more.

After a next period of concentration, Mr. Zhang asked for permission to touch the plastic bottle, already held by the investigator (Dr. Du), and, without inverting, shook it. As the result most of the tablets came out, together with the tungsten sample. Immediately inspected, neither the bottle, nor its seal, nor the plastic pouch showed any damage or alteration.

4. Burning of a shirt

During the experiment Mr. Zhang wished to burn cloth. One of the investigators (Dr. Du) took off his white, polyester shirt and handed it to Mr. Zhang. Mr. Zhang put the shirt on the table and touched it with his hand. At that time smoke came out of the

fabric and a number of black, burned spots appeared. Using his thumb, Mr. Zhang touched the fabric in a few more places creating each time burned spots.

II - Analysis of the samples

1. Measurement of the properties of the superconductors

In the experiment we have used Y-Ba-Cu-O ring shape superconductor node (joint) called bridge node. Heating it above 400°C as well as mechanical damage or any structural changes would have an effect on its superconducting properties. In spite of having penetrated through many layers of trace detector foil and through the bottle's wall, the bridge node retained its magnetic sensitive properties. The response to AC and DC magnetic field was measured, within the experimental uncertainty, to be the same as before.

2. Measurement of the properties of the radioactive α source

In the experiment we have used a $1\mu\text{Ci}$, 2mm in diameter, ^{241}Am α source (from a fire detector). Ten days prior to the experiment the α spectrum was measured with a Si(Au) surface barrier detector. Some 28 hours after the exposure to the paranormal abilities the spectrum was remeasured under otherwise the same conditions. Neither the intensity, nor energy distribution showed any changes above the error limits.

3. Mössbauer spectrum measurement

In the experiment we have used Mössbauer α -Fe absorber: 25 μm thick, 10 mm in diameter. There were two such absorbers. One served as a reference sample, while the other, some 48 hours after it penetrated the bottle, was used to measure Mössbauer spectrum.

Mössbauer spectrum is a sensitive probe of a nuclear environment. If there were changes in charge distribution of the atomic electrons or in nuclei themselves, the Mössbauer spectrum would change also. There were no changes observed in the Mössbauer spectrum of the α -Fe absorber after it penetrated the wall of the bottle.

4. Analysis of gas chromatogram of the liquor sample

Dagu liquor sample was used. Although it did not emerge from the bottle it could have been influenced by paranormal abilities. Gas chromatogram of the sample was made. It showed that the spectrum and the alcohol content did not change. It means that there were no obvious changes in the molecular structure of the sample.

5. Analysis of nuclear traces in the trace detectors

The goal of this test was to check for possible annealing or sensitization effects to the previously induced nuclear traces in the trace detector material after it has penetrated the bottle. Two groups of CR-39 solid state nuclear trace detectors were used. They were both irradiated by fission fragments, but only one group was influenced by the paranormal abilities. Both groups were likewise etched and carefully inspected under a microscope. No significant differences were observed.

6. Observation of the foil trace detectors.

After the tungsten sample and tablets penetrated through the walls of the plastic bottle and through the sealed pouch made of a trace detector foil, the foil was inspected visually and with the aid of a microscope. The pouch was not broken and there were no traces of damage. After etching the foil was reinspected and again, it did not show any traces of passing microscopic particles or objects.

7. Observation of surface appearance of the metal sample with an electron microscope.

By means of an electron microscope the surface appearance of the metal sample used in the experiment was compared with the surface appearance of a reference sample. No obvious changes were visible. The same was true for the deeper layers of the metal structure exposed after grinding the surface away.

III - Conclusions

1. The experiment has demonstrated once again that Mr. Zhang Daosheng possesses paranormal abilities. He can make objects penetrate walls of sealed containers. In this experiment all of the experimental artifacts were prepared by researchers from the China Institute of Atomic Energy. The researchers had no contact with Mr. Zhang before the experiment. Many of the samples such as the superconductor nodes, radioactive source, Mössbauer absorber, or the irradiated nuclear trace detectors have unique characteristics and could not be substituted. The experiment has been viewed simultaneously from different angles. Considering all of the above the experiment was conducted under tightly controlled conditions.

2. The experiment confirmed that Mr. Zhang can transfer objects into a sealed envelope. His clairvoyance enables him to recognize characters in the envelope without opening it. He can also transfer the characters he wrote on an envelope to objects inside the envelope. It was confirmed that, during such transfer, the characters can be reduced in size. However, the experiment has also showed that the transfer can only be done onto surfaces to which the ink can adhere. Also, once the visibility of the characters is diminished, Mr. Zhang has difficulties to recognize

them in a sealed envelope as well.

3. The experiment demonstrated that Mr. Zhang has the ability to make the hands of a watch penetrate other person's hand without inflicting any pain or other sensation.

4. The experiment demonstrated that Mr. Zhang has the ability to burn cloth instantly upon the touch of his hand.

5. None of the objects (superconducting node, radioactive source, Mössbauer absorber, solid state trace detector, metal sample, liquor sample, etc.) that either penetrated the bottles or might have been influenced by the paranormal abilities [of Mr. Zhang] showed any observable changes in their molecular, atomic or nuclear structures.

6. Since there were no traces, detectable under a microscope, after particles penetrated nuclear trace detector foils, the mechanism of such penetrations still remains an open question.

About twenty senior researchers observed this experiment. Among them were physicists and chemists from China Institute of Atomic Energy and somatic science specialists from the Institute of Space Medico-Engineering.

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Translated by Qingli Li
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用微观实验手段研究人体特异功能 使物体穿过器壁的现象*

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近年来气功和人体特异功能的许多异常现象对现代物理学的成果提出了挑战^[1]。运用现代物理学的先进技术和仪器设备, 包括利用原子核物理的实验技术, 配合人体科学的研究是有一定意义的。

本实验的目的: 1. 试图观测经人体特异功能作用, 从密闭玻璃瓶和塑料瓶移出的物体其微观结构及性能是否有变化; 2. 利用核径迹探测器观察人体特异功能使物体穿过器壁的机制是否是将被物体分解为原子核量级的微观粒子并以亚光速穿过障碍物。

该实验是与中国航天医学工程研究所张宝胜合作完成的。实验日期是1988年7月10日, 实验地点在中国原子能科学研究院。

一、实验过程

1. 信封装红字及向信封内移物和移字迹

实验前准备了二片涤纶薄膜。一片是透明的, 厚 ~ 2 mm, 用红色记号笔写上了“中华神功”四个字, 上面盖上了另一片红色半透明固体径迹探测器, 约厚0.5 mm。二片探测器的四个角用白色胶带纸粘在一起。这样红色字迹经红色膜复盖后就很难辨认了。事先密封在牛皮纸信封内。上述工作由实验组一人(李庆利)单独完成, 其他实验人员均不知道写在里面是什么字。实验前该实验人员也不可能与张宝胜有任何接触。

当张宝胜来到实验场地, 隔着信封描述了里面装的物品的形状, 还说四个角用橡皮膏粘住了。并说: 四个红字上面又有红片挡着看不清。张宝胜先后在纸上写了“中华”, “人体神秘”等字样, 然后又涂掉了。从当时情况看, 隔着信封, 张可以看到里面所装物品的形状及颜色, 但对没有信封时普通人难于识别的字迹, 张也很难识别。

随后张将一枚一分钱的硬币放在信封外面, 并折一个信封角盖住, 让实验人员(陈永寿)拿在手里, 当张说: “好了”之后, 实验人员松开手观看时, 硬币已进入信封。

此后, 张在此信封上用圆珠笔写了“您好”, “谢谢”, “你”的字样。与通常情况不同的是信封内没有信纸, 而圆珠笔在径迹探测器片上是写不上字的。张告诉人家, 字转移到四个

* 编者按: 这是一个不易使常人相信的实实在在的人体特异功能现象, 作为人体科学的研究实例可提供读者思考。

角上了。当众打开信封观看时，一分钱硬币被倒出。同时看到“您好”，“谢谢”，“你”分别移入三个角的胶带纸上。其字迹笔体与信封上的一样，但明显被缩小了。

实验表明：用圆珠笔写不上字的物品，做字迹转移实验时也移不上去。但移进的字迹大小可以与信封外的不同，本实验说明，在转移字迹时有缩小的功能。

2. 意念损坏正在计时的手表

张宝胜将李庆利的一块正常运转的北京牌手表让李紧握在手里，张用拇指和食指在该实验人员的拇指和食指中间的皮层上一捏，拿出了手表的分针，接着又在该处拿出手表的秒针。接着又在中指和无名指之间的皮层上一捏拿出了时针。此时张说：表蒙已坏。当李伸开手掌观看时，在表蒙中部有类似高温烧毁的断裂缝隙，但表蒙仍扣在表上，当倾斜时大半个表蒙方脱落。尽管手表的表面损伤很大，但机壳内机械仍在正常运转。在取表针的过程中，李庆利未感到有任何疼痛，而且在场的不少观察人员清楚地看到表针由短到长被垂直取出的过程。

3. 穿过空间障碍实验

本实验准备了两个瓶子：(1) 生理食盐水透明玻璃瓶，高约 14 cm，半径约 11 cm，带有紧配合的橡皮翻边瓶塞。在瓶内放了下列样品： $^{241}\text{Am}-\alpha$ 源一个， $\alpha\text{-Fe}$ 穆斯堡尔吸收体一块，带有 Josephson 桥结的高温超导片二个，固体径迹探测器四片，金属样品一块，普通螺母连着棉线挂在瓶口，直径 1 cm 高 3 cm 的塑料小瓶其中封装白酒样品，此外还放了牙周宁黄色药片十粒，维生素 C 白色药片 10 粒。(2) 透明塑料瓶，高 8 cm，半径 2.5 cm，带有塑料螺口盖。在瓶内放入了密封的由固体径迹探测器薄膜制成的小袋，小袋内有一金属样品一块，黄色牙周宁药片 10 粒，维生素 C 白色药片 6 粒。这样当瓶内物体被移出瓶外时，首先要穿过径迹探测器薄膜。如果有一定动能的重粒子穿过固体径迹探测器，则经处理后将在探测器上留下可观测的径迹。在实验过程中，由一实验人员（杜学仁）双手握住透明玻璃瓶，张宝胜的双手再握住该实验人员的手，瓶内维生素 C 药片一粒首先从瓶底掉出瓶外，接着黄色药片也出来二粒。然后超导片与包超导片的塑料小袋（由数层固体径迹探测器薄膜制成）一起移出瓶外，密封的塑料袋未发现破的迹象。

一个有趣的现象是在场所有观察者观察到连接螺母的线好像变硬了，从瓶口橡皮塞边缘向外自动挤出来一段，约 3—4 cm 长。

随后径迹探测器也被移出一块。用同样的方式，后来（在餐桌上）张又将其他三块径迹探测器，另一超导片，金属样品及 $\alpha\text{-Fe}$ 穆斯堡尔吸收体移出瓶外。经查看玻璃瓶没有任何破损，移出的物品用肉眼观察没有破损。而 $^{241}\text{Am}-\alpha$ 源，白酒样品及带线螺母始终没有被移出瓶外。

对另一透明塑料瓶，张宝胜让实验人员（杜学仁）托在手掌上，张握着瓶的上半部上下摇动，此时大部分药片从瓶底移出瓶外，其中金属块也移出来。经当场查看，不仅塑料瓶壁没有任何破裂的迹象，连密封的径迹探测器薄膜小袋也完好无缺。

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4. 徒手燃烧衣物

在实验过程中，张宝胜还演示了徒手烧衣服。实验人员(杜学仁)当场脱下白色的确良衬衣，张将衬衣团成一堆放在桌上，将手伸到衣服下面，这时有烟从衣服上冒出，实验人员发现衣服上有一、二处已被烧焦。然后张在没有被烧的部分用两拇指使劲一按，此处当即被烧焦了二块。

二. 实验结果分析

1. 对超导结性能的测试

该实验所用的是钇钡铜氧环状超导结(桥结)，一般遇 400°C以上高温，或机械破坏或结构改变都将影响其超导性能。当该超导结从包层(数层径迹探测器薄膜)及瓶壁穿出后，经测试，结的磁敏特性即对交流、直流磁场的响应与从前的性能比较，在误差范围内保持不变。

2. 对 α 源的性能测试

该实验所用的是²⁴¹Am 火警源， ϕ 2 cm，强度约 1 μ Ci，在实验前 10 天，用金硅面垒型半导体探测器测得能谱。在同样测量条件下，在经特异功能影响后约 28 小时再测其能谱。实验结果表明，经特异功能影响后的 α 源的强度和能量在实验误差范围内没有变化。

3. 穆斯堡尔谱的测试

该实验所用的穆斯堡尔 α -Fe 吸收体 25 μ m 厚， ϕ 10 mm，两块完全相同的 α -Fe 吸收体，一块经特异功能移出后 48 小时测其穆斯堡尔谱。另一块作为对照标准。

穆斯堡尔谱作为核环境的灵敏探针，只要原子核外的电荷分布或核本身受到影响，其谱线均会改变。但实验结果表明，用经特异功能移出瓶外的 α -Fe 吸收体所作的穆斯堡尔谱没有任何变化。

4. 酒样品的气相色谱分析

该实验所用酒样品为南福大曲白酒。虽未能取出，但也可能受到特异功能的影响，故还是对其进行了气相色谱分析。结果表明，其组分及其含量均未见明显变化，即对样品分子结构没有明显影响。

5. 对径迹探测器中已有的核径迹的分析

该实验的目的是想观察当径迹探测器被特异功能移出瓶外后是否对原来原子核在固体中产生的损伤径迹有退火或敏化作用。所用的是用裂变碎片照射过的 CR-39 固体径迹探测器片。将实验中移出的碎片与未经特异功能影响过的两组 CR-39 样品在同样条件下蚀刻并用显微镜观测，未发现差异。

6. 对薄膜固体径迹探测器的测试

当用薄膜固体径迹探测器制成的密封小袋内的金属钨块及药片被移出小袋并穿过密封塑料瓶后，经宏观检验及显微镜观测均未发现密封小袋有任何破碎迹象，经蚀刻后，并用显微镜仔细观测，仍未见有微观粒子及物体穿过的径迹。

7. 电子显微镜对金属样品表面相貌的检测

用电子显微镜对被移出的金属样品对照样品进行表面相貌的分析，发现表面结构没有明显变化。将表面磨去后对深层的结构也进行了观测未发现有异常的变化。

三、结 论

1. 该实验又一次对张宝胜具有使物品从密封的容器中通过器壁移出的人体特异功能进行了检验。本实验所用的全部实验用品均由中国原子能科学研究院研究人员准备，事先未与张有任何接触。诸如超导体、放射源、穆斯堡尔 α -Fe 吸收体、被辐照过的核径迹探测器等样品是不可能用任何魔术手法取代的。实验人员对实验过程从不同角度进行了观测。

2. 该实验也证实了张宝胜有将物品移入信封内；隔信封认字；将书写在信封上的字迹移入信封内物品上的特异功能。本实验证实了字迹移入尚有缩小的功能。但实验表明，圆珠笔写不上字的物品，字迹也移不上去。在通常状态下普通人难于识别的同种底色上的字迹隔信封张宝胜也难以识别。

3. 该实验证实张宝胜具有使人体没有任何感觉的情况下，将表针间隔他人之手移出的功能。

4. 该实验又一次证实了张宝胜有徒手使物理超超导体的人体特异功能。

5. 经张宝胜特异功能穿过空间障碍的物品及受该功能影响的物品诸如：超导体、放射源、穆斯堡尔吸收体、固体径迹探测器、金属样品及酒样品等，经分析和观测其微观结构（分子结构、原子结构、核结构）未发现变化。

6. 物体受张宝胜特异功能作用穿过径迹探测器薄膜后，经宏观及显微镜观测径迹探测器上未发现有孔洞、破碎痕迹及粒子穿过的径迹，其机制，尚待进一步研究。

出席观看实验的有：

中国航空医学工程研究所的除一信、翟适香；

中国原子能科学研究院领导及有关高级研究人员：孙祖训、李福恒、严叔衡、任大明、仇振朽、汪德熙、孙汉城、丁大钊、姜承烈、王翌善、曹温年、孙树正、杨存祥、翁培昆、张家骏、朱道宏、方吉东等。

笔者感谢他们对该研究工作的关心，支持和参加有益的讨论。