

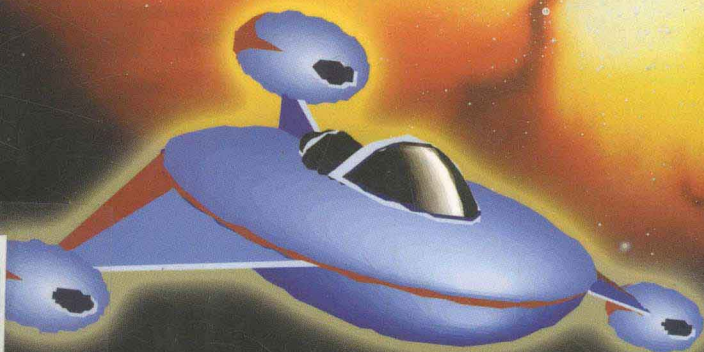


阅读空间 · 英汉双语主题阅读

科学或伪科学

高中和大学低年级适用

Science or Hoax?



中国教育学会
外语教学
专业委员会
推荐

中国电力出版社
www.centuryoriental.com.cn

CENTURY ORIENTAL 2 世纪东方

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魏玉梅 译

京权图字 01—2004—4513

图书在版编目 (CIP) 数据

科学或伪科学 / 美国凯勒斯出版公司编著; 魏玉梅译.

北京: 中国电力出版社, 2005

(阅读空间·英汉双语主题阅读)

书名原文: Science or Hoax ?

ISBN 7-5083-2686-5

I .科… II .①美…②魏… III.英语—阅读教学—

高中—课外读物 IV.G634.413

中国版本图书馆 CIP 数据核字 (2004) 第 074815 号

Science or Hoax?

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Chinese Translation Copyright © 2004 by China Electric Power Press

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《阅读空间·英汉双语主题阅读》由美国北极星传媒有限公司授权出版,
北京行走出版咨询有限公司策划

科学或伪科学

原著: Joe Nickell 等

丛书策划: 北京行走出版咨询有限公司

翻 译: 魏玉梅

责任编辑: 李 艳 李宝琳

出版发行: 中国电力出版社

社 址: 北京市西城区三里河路 6 号 (100044)

网 址: <http://www.centuryoriental.com.cn>

印 刷: 北京世艺印刷有限公司

开 本: 178 × 226

印 张: 3

字 数: 57 千字

版 次: 2005 年 1 月第 1 版, 2005 年 1 月第 1 次印刷

书 号: ISBN 7-5083-2686-5

定 价: 8.90 元



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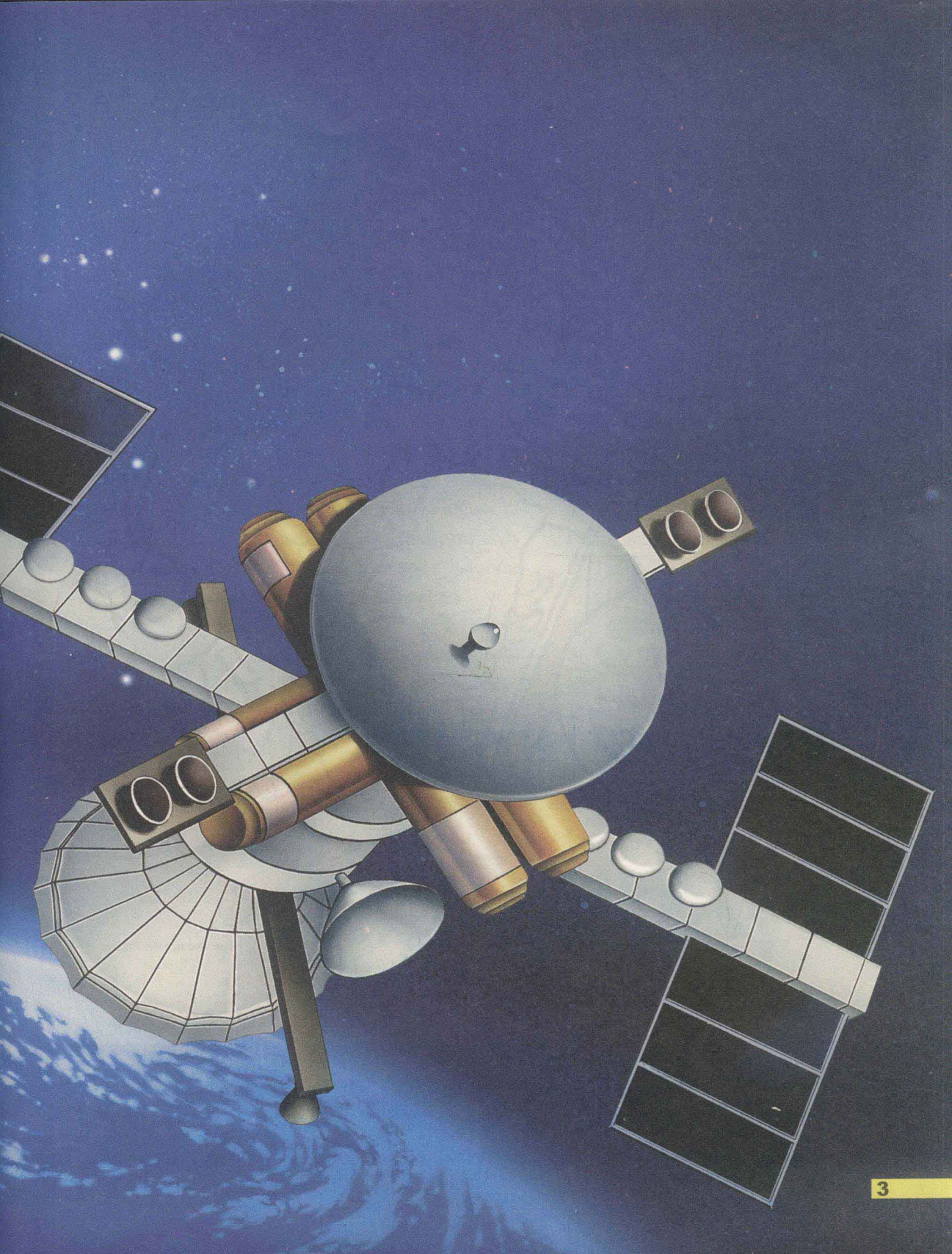
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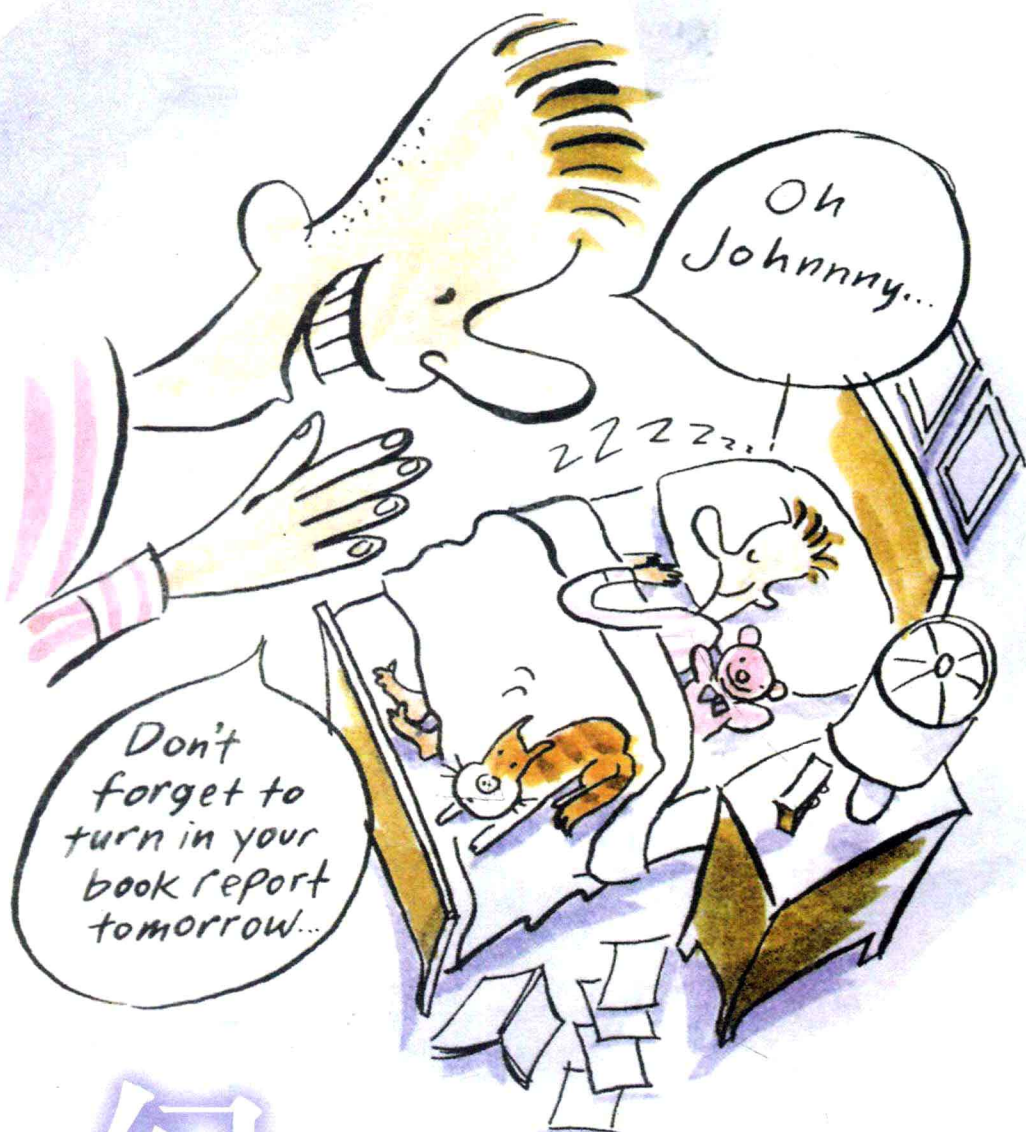
当你浏览本书，你会发现，伪科学以各种形式出现。一方面，有四月愚人节的玩笑或讲述有关美洲短吻鳄生活在下水管道中的乡村神话。许多这样的故事能给我们提供娱乐而并无任何害处。另一方面，有许多严肃的伪科学以科学的名义而令人难忘，这些伪科学能够毁坏整个学术体系，提供无效的医学“治愈方案”，或者浪费巨

大的财力于无谓的调查上。

尽管科学的伪科学具有悠远的历史，但是专家担心互联网和过于热情的媒体正帮助传播伪科学的这种形式。对抗这种传播最好的办法就是为知悉的公众服务，能够从幻想中区分出逻辑，从真相讲述者中区分出骗子……

仔细阅读本书吧，记住：睁大你雪亮的眼睛！





illustrated by Mike Phillips

幻觉

by Stephen James O'Meara

Phantom Bodies

Some people claim they see ghosts. Others say they can see "themselves" as a mirror-image phantom, a sort of body double. Still others have had an out-of-body experience, when they "left" their bodies (say, during sleep) and saw themselves lying there. These spooky experiences may in fact be real — real in the mind, anyway. Peter Brugger, a neuro-scientist at University Hospital in Zurich, Switzerland, says that these phantom images are mere mental sensations.

For instance, it's a well documented fact that people who have had, say, an arm amputated still sense the presence of that lost arm, even though their brain no longer receives nerve signals from the lost limb. Ghosts and body doubles, Brugger says, are a similar sensation, but spread to the whole body. It's a result, he argues, of brain damage to the areas that help us to sense our body in its surrounding space. As proof, he notes that some people sense but do not see their body double.

What about out-of-body experiences? Brugger says that these may be caused by temporary overactivity of certain brain regions, which can affect what we see — especially when under high emotional stress.

有些人宣称见过鬼魂。有些人宣称能够看见自己的翻版即自己的灵魂。还有些人宣称经历灵魂离开躯体(比如睡觉时),看见自己躺在那里。这些怪异的经历或许实际上是真实的——当然是头脑中的真实。瑞士苏黎世大学医院神经学家彼得·布鲁格称这些幻影不过是大脑中的幻觉而已。

例如,有足够的事实证明经历过截肢的人,尽管大脑不再接收到断臂传出的神经信号,但仍感觉到断臂的存在。布鲁格说鬼魂和灵魂属于类似的幻觉,非局部传感而是遍及全身。他说之所以出现幻觉是因为负责感知身体在周围环境中存在的大脑局部受到了伤害。作为例证,他指出,有些人能感觉到但看不到自己的灵魂。

体外经历或灵魂说又是怎么回事呢?布鲁格说这可能是因为大脑局部暂时活动过度的缘故,从而影响到我们的感官,在经历巨大感情压力的情况下尤其如此。



The "Paran"

“超自然”伪科学

Paranormal claims are everywhere — on TV, on the Internet, in magazines, and in conversations. . . maybe even your own. Things that seem beyond the known natural world and normal human experience are called "paranormal," and include reports of ghosts, flying saucers, legendary monsters, and many other strange things. Although evidence for the paranormal is usually very weak, belief in it can be strong for many reasons. As a result, some people are tempted to create hoaxes.

A hoax is a form of mischief intended to fool others. (In fact, the word hoax is thought to be a shortening of "hocus-pocus", a term meaning trickery.) Throughout history and into the 21st century, there have been, and continue to be, many paranormal hoaxes.

IT'S BIGFOOT!

Take Bigfoot, for example. It is supposedly a big, hairy, "man-creature" that lives in remote regions of North America (especially the Pacific Northwest). Although not a single Bigfoot has ever been captured, killed, or found dead, many people believe in the creature's existence. This is largely due to giant footprints, discovered in mud or snow. They often measure forty or more centimeters long — thus giving the creature the name "Bigfoot."

超自然之说无处不在——电视上、互联网上、杂志上……甚至你自己的谈话中。那些超出已知的自然世界及正常的人类经验的事物即被称之为“超自然”事物，包括有关神鬼、飞碟、传说中的怪物及其他神秘现象的报道。尽管有关超自然现象的证据不足，然而由于种种原因，人们却对其大为相信。因此，一些人便大行其道策划起各种骗局来。

骗局是一种旨在欺骗他人的把戏。(实际上，hoax (伪科学) 一词为hocus-pocus的缩写形式，意为“欺骗”。) 有史以来，直至21世纪，超出科学范畴的种种骗局一直在大行其道，而且会继续存在下去。

大脚!

以“大脚”为例。据说“大脚”是生活在北美特别是太平洋西北部偏僻地区的一种巨大的、多毛的、类似于人的生物。尽管从未有一只“大脚”被捕获、猎杀，也从未发现过一只死“大脚”，人们依然相信其存在。这主要缘于人们在泥地或雪地上发现的巨大的脚印。这些脚印通常长达四十多厘米，“大脚”之名便由此而来。

然而，这些脚印是真的吗？1982年，一位上了年纪的男子称：他已伪造“大脚”踪

ormal" Hoax

by Joe Nickell

But are the prints genuine? In 1982, an elderly man admitted he had made hoax Bigfoot tracks for 50 years. He began in 1930 when he was a Forest Service worker near Mount St. Helens, Washington. As a prank, he carved huge feet from a piece of wood and had a friend fasten them to his own feet. Finding some unattended automobiles, the hoaxers left fake footprints nearby. Naturally, when the cars' owners returned from picking berries, they discovered the "tracks" and rushed to report their experience.

A famous Bigfoot encounter — or hoax — occurred in 1967, when the creature was captured on film. Self-styled Bigfoot hunter Roger Patterson and a friend were riding horseback in northern California's Bluff Creek area. Suddenly, they encountered a hairy monster that frightened their horses, causing them to rear. Patterson jumped off, grabbed his movie camera from a saddlebag, and filmed the creature as it strode away. Patterson's film continues to be debated. Bigfoot promoters believe it shows a genuine creature and not a man in a fur suit, as skeptics suspect. As one scientist quipped, "I couldn't [exactly] see the zipper."

Another fabled creature that has attracted hoaxers supposedly lives in Scotland's large lake, Loch Ness. The monster was first photographed in 1934 — suspiciously, on April Fool's Day! Sixty years later, in 1994, it was learned that the

迹长达50年。从1930年他在华盛顿州的圣海伦斯山附近从事森林服务工作以来，他便开始了这种伪造。他用木头刻制了一双大脚，然后让朋友帮他捆在自己的脚上。一旦发现没人看管的汽车，恶作剧者便在附近留下伪造的脚印。于是，汽车主人在采摘浆果归来之后，便发现了这些“脚印”并马上将其发现公布于众。

一次著名的“大脚”事件——或曰骗局——发生在1967年，当时那怪物被拍下了照片。一位自封的“大脚”猎手罗杰·帕特森和朋友正骑马行进在加利福尼亚北部的布鲁夫湾地区。突然，他们遇到一只多毛怪兽。马受惊吓，嘶叫不止。帕特森立刻跳下马背，从鞍囊中抓起相机，乘怪物窜离之际拍下它的照片。帕特森所拍照片至今仍受到质疑，但相信“大脚”确实存在之人认为照片所拍之物为真实生物，而不是持怀疑观点者所言的披着皮毛的人。正如一位科学家讽刺道：“我只是没能看清皮衣上的拉链罢了。”

对骗局制造者大有诱惑力的另一种传说中的生物是苏格兰的尼斯湖水怪。首





famous photo was indeed a hoax. The "monster" had actually been a small model photographed close-up. (See "The Loch Ness Monster: Anatomy of a Hoax.")

IT'S A FLYING SAUCER!

Unidentified Flying Objects (UFOs) have also been hoaxed. Many people believe the unknown daytime objects and nighttime lights represent spaceships from other worlds. Most, however, are eventually identified as research balloons, meteors, secret military aircraft, or other natural or man-made things. Hoaxes include fake photos and prank "flying saucer" launches.

One such prank — at Westport, Connecticut, in 1966 — was played by some schoolboys as an experiment. They wanted to determine how accurate UFO reports were, and came up with a plan. They obtained some surplus weather balloons and hung a lighted red flare from each. Over a period of time, they would release a balloon and then check the local newspapers. As the flying saucer reports came in, some observers saw a blinking red light, and others, a cluster of red or even multi-colored lights. One person described the UFO as having

次拍摄到水怪是在1934年，但是令人怀疑的是，那一天恰好是愚人节。60年后的1994年，人们终于弄清原来那张著名的水怪照片的确是一个骗局。所谓水怪实际上是一个小模型的特写镜头（参见《尼斯湖水怪：一场骗局的剖析》一文）。

那是飞碟！

不明飞行物(UFO 或称飞碟)同样也属于虚乌有。许多人认为那些性质不明的日间物体或夜间发光体均为外星飞船。然而最终探明多数为研究用气球、流星、秘密军事飞机或者其他天然或人造物体。伪科学骗局包括假照片及恶作剧式的飞碟发射等。

1966年在康涅狄格州，一群男孩便实验性地上演了一场类似的恶作剧。他们希望证实有关UFO报道的准确性，于是便想出了一个计划。他们设法弄到一些多余的气象气球，每个气球下面吊一盏红色照明灯。每过一段时间，他们就放飞一只气球，然后查阅当地的报纸。关于飞碟的报道蜂拥而至。一些观察者称看到闪烁的红光，另一些说是一串红色或多种颜色的光。有人称UFO带有射线状的辐条，也有人说看到飞碟带着探测地球某一位置的“探照灯”。

raylike spokes, while another claimed to have seen a flying saucer with a "searchlight" trained on the ground.

Not only UFOs, but their alleged pilots have also been faked. One night in 1953, three men burst into the offices of the *Atlanta Constitution* newspaper carrying the body of a small, strange, manlike creature. The men claimed they had come upon a red flying saucer parked in the road ahead of their car. Three small "humanoids" were running to get into the spaceship, but the driver skidded into one and killed it. The *Constitution* story created a sensation, and the newspaper was swamped with telephone calls. Then an investigation revealed that the alleged alien was actually a monkey whose tail had been cut off and whose body had been shaved! The hoax had been the result of a \$10 bet.

It is a measure of popular interest in UFOs that the most famous case — the 1947 "Roswell incident" — has inspired numerous hoaxes. The case began with the report of a crashed "flying disc" on a ranch near Roswell, New Mexico. The wreckage was made up of foil, paper, sticks, string, tape, and rubber. It was soon identified as the remains of a weather balloon. More recently however, it has been revealed to have come from a U.S. government spy balloon.

Nevertheless, over time the legend grew that the debris was from a spacecraft and that alien bodies had been recovered. These were supposedly hidden at a secret facility, where they were medically examined. The tale inspired many hoaxes, including forged government papers, a fake eyewitness's diary, and even film of an "alien autopsy" featuring a rubbery humanoid.

不仅是 UFO，而且所谓的飞碟驾驶员也是假的。1953 年的一个夜晚，三个男子携带一具奇特的、类似于人但比人小的尸体闯进《亚特兰大宪法报》报社办公室。他们声称在公路上他们的汽车前面停着一只红色的飞碟。三只小“类人动物”向太空船急奔而去，但司机快速捉住并打死一只。《亚特兰大宪法报》登载的消息引起轰动，报社里电话铃声大作。随后的调查表明，所谓的外星人只不过是一只被剃光毛切掉尾巴的猴子。这场恶作剧只是缘自 10 美元的赌金而已。

1947 年十分引人注目的“罗斯韦尔事件”引发了众多恶作剧，这也从侧面反映了公众对 UFO 的兴趣。事件始于有关新墨西哥州罗斯韦尔附近一个农场上飞碟坠毁的报道。飞碟残骸中包括箔、纸张、木棍、线绳、磁带以及橡胶等。很快便查明这不过是气象气球的残骸而已，但最近又探明是美国政府的间谍气球。

然而过了一段时间，又有传闻说残骸的确出自太空船，而且已发现外星人尸体。这些东西据说保存在一个秘密的装置内，正在对其进行医学检查。这一传闻引发种种骗局，其中包括伪造政府文件、目击者日记，甚至以伪造的橡胶类人动物所制作的外星人尸检照片。



IT'S CASPER!

Like monsters and UFOs, ghosts also attract hoaxers. In 1848, two young girls, Maggie and Katie Fox, started a hoax that never really ended. At their home at Hydesville, New York, they pretended to talk with the ghost of a murdered man. They communicated by secret knocking sounds that signaled "yes," or "no," or other simple answers. Years later, the girls confessed it was all a trick. Maggie had been able to produce the noises by secretly slipping off her shoe and snapping her big toe against the bare wooden floor. But in the meantime, the idea of spirit communication — or a belief called "spiritualism" — had caught on. Others (calling themselves "mediums") discovered they could also receive spirit messages. Some were probably sincere, although highly imaginative. Others produced hoax spirit writings, photographs, and other fake signs from the spirit realm.

Haunted houses are another means ghosts supposedly use to communicate with people. Sometimes "poltergeists" (or "noisy spirits") create disturbances in a home. Objects may be mysteriously moved, dishes broken, things thrown about. Typically, a mischievous child or even an emotionally disturbed member of the household is responsible.

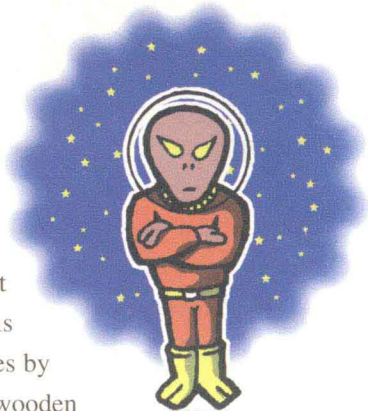
America's most famous haunted house is located in Amityville, New York. Its story is told in a book and a movie, both titled *The Amityville Horror*. In 1974, a man murdered his parents, brothers, and sisters in the house. A year later, it was bought by a couple who soon claimed they were driven out by spooky events. Green slime oozed from the ceiling. Windows

那是卡斯珀!

和怪物及UFO一样,鬼魂也受到造假者的青睐。1848年,两个年轻姑娘,麦吉和凯蒂·福克斯,开始了一场旷日持久的骗局。她们在纽约海德斯威尔的家里,利用表示“是”或“否”或其他简单答语的隐秘的击打声,制造了与一被杀男子的鬼魂交谈的假象。多年以后,两个姑娘承认一

切都是骗人的把戏。麦吉悄悄将鞋脱掉用大脚趾敲击木地板制造声响。当时一种被称之为“招魂术”或与亡灵交谈的说法正盛行一时。一些自称“灵媒”的人声称可以接收亡灵信息。尽管充满虚构幻想色彩,其中一些人可能是心怀诚意的,但另外一些人却伪造亡灵书信、照片或其他冥界信物。

据说鬼魂与人沟通的另一种方式是频繁造访住家。家里时常被“喧闹调皮的鬼”搞得不得安宁:可能是东西被神秘移动,盘子被打碎,东西扔得到处都是……肇事者通常是家里的捣蛋鬼孩子或患有精神疾病的家庭成员。



and a heavy door were damaged. And strange, demonlike tracks were found in the snow outside. But investigation showed these events never happened. The murderer's lawyer finally confessed how, for money, he and the supposedly haunted couple had "created this horror story over many bottles of wine."

IT'S ONE MORE FAKE!

Many other paranormal claims have involved hoaxes. For example, some "psychics" have fooled even scientists with demonstrations of fake mind-reading and other powers. And in England, hoaxers created much mischief by secretly pressing giant circles and designs into wheat fields. These "crop circles" were mistaken for UFO landing traces, unusual wind formations, and messages from higher beings.

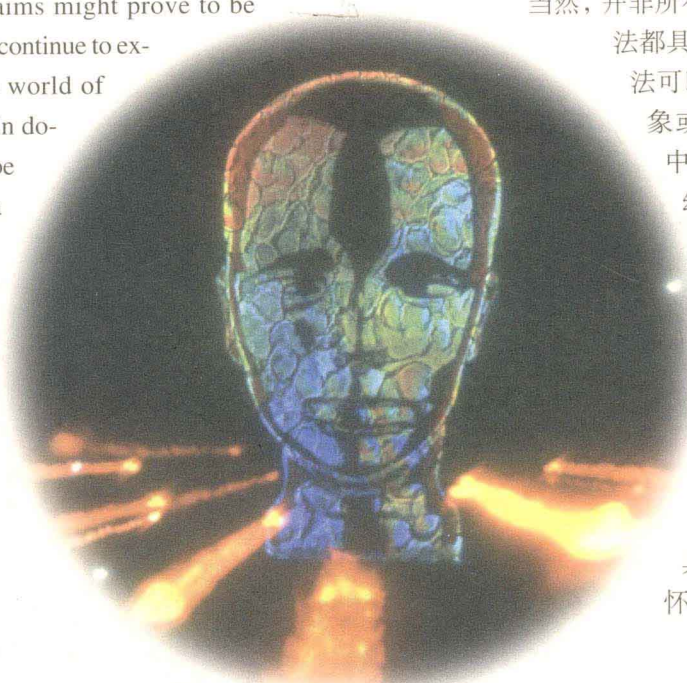
Of course, not all paranormal claims are hoaxes. Some are explained by unusual natural events, or other simple causes, including tricks of the mind. But because some claims might prove to be true, investigators continue to explore the strange world of the paranormal. In doing so, you must be armed with a critical, even skeptical, mind in order to rule out mistakes, illusions, and — of course — hoaxes.

纽约州阿米蒂维尔有一座在美国十分有名的“鬼屋”，名为《阿米蒂维尔恐怖》的书和电影都讲述了这一故事。1974年，一名男子在家中杀了父母、兄弟、姐妹。一年后，一对夫妻购买了这座房子并很快声称他们受到种种怪事的侵扰：从屋顶渗出黏液，窗户、大门被损坏，屋外雪地上发现神秘的鬼魂迹象。但调查表明这些事情从未发生过。杀人犯的律师最终坦白了他和那对声称被鬼缠身的夫妻“在金钱的驱动下于酒后杜撰出了这一恐怖故事”。

又是一个骗局！

其他许多超出科学范畴的断言也与欺骗有关。例如，一些“巫师”以虚假的透视力或其他所谓特异功能演示甚至使科学家受到蒙骗。在英国，造假者在麦地里秘密伪造圆形及其他图案，这些“麦田卷”被误认为是不明飞行物降落留下的痕迹、奇异的风团形成物，以及外星生命留下的信息。

当然，并非所有关于超自然的说法都具有欺骗性。一些说法可以从奇异的自然现象或其他简单的理由中得到解释，比方说幻觉。然而由于某些断言有可能被证实是正确的，研究人员仍在对奇异的超自然世界进行探索。要想分辨错误、幻觉，还有骗局，人们务必要具备批判的甚至是怀疑的头脑。



Shrouded in Mystery: **THE TURIN DEBATE**

by Liddy Gerchman

"After spending all this time, modern science still cannot provide an adequate explanation for the image on the shroud."

— Barrie Schwartz

"No burial cloth in the history of the world has left a picture of its tenant!"

— Joe Nickell

“直至今日，现代科学对裹尸布上的影像仍然无法作出详尽的解释。”

— Barrie Schwartz

“世界历史上从未有过裹尸布上留有尸主影像的记载！”

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This past fall, thousands of tourists and pilgrims filed past a stained piece of cloth at the cathedral in Turin, Italy. The famous Shroud of Turin was on display for 10 weeks as part of the Catholic Church's celebration of the year 2000. Even as visitors venerated the linen sheet as the burial wrapping of Jesus Christ, scholars debated its authenticity. Though some believe it truly does date from Jerusalem at the turn of the first century, most scientists agree that the shroud is a clever medieval hoax. People on both sides of the debate have tried to use science to prove their claims.

Jesus, the central figure of Christianity, was crucified by the Roman government around the year A.D. 33, wrapped in a shroud, and buried in a tomb. Three days later, Christians believe that Jesus was resurrected — that he became alive again. Over time, Christians began to collect objects related to the crucifixion for display in churches. Though some of these objects may have been authentic, others were clearly forgeries. For example, there are approximately 40 different pieces of cloth that have been presented as the shroud of Jesus.

前几年的秋天，成千上万的游客和朝圣者前往意大利都灵大教堂参观一块污迹斑斑的布。这块著名的都灵裹尸布作为天主教大教堂 2000 年庆典的一部分而展出了十周的时间。游客们把这块亚麻布当作耶稣基督的裹尸布而加以崇拜，但学者们却对其真实性提出质疑。尽管一些学者相信它的确可以追溯到公元一世纪末的耶路撒冷，但多数科学家认为裹尸布是一出精明的中世纪骗局。争辩的双方均试图用科学来证实各自的主张。

基督教的核心人物耶稣被罗马政府于公元33年前后钉死于十字架上，然后裹尸而葬。三天后，基督徒们相信耶稣复活了。长久以来，基督徒们便开始收集与基督受难有关的物品，置于教堂内展出。尽管有些物品可能是真的，有些却显然是伪造的。例如，大约有40块布均号称是耶稣基督的裹尸布。

神秘的裹尸布： 都灵之争

In 1389, Pierre d'Arcis, the bishop of Troyes, France, was on the lookout for these hoaxes. He wrote a letter to the pope, Clement III, complaining that since 1355, a linen sheet in the village of Lirey had been displayed as the shroud of Christ. Measuring 4.36 x 1.10 meters, the cloth had red stains and showed a faint picture of the front and back of a man. D'Arcis was certain it was a fake, writing that the image had been "cunningly painted," and mentioning that an artist had confessed to creating it. That was among the first mentions of the Shroud of Turin, and despite d'Arcis's warning, pilgrims continued to visit the shroud.

After arriving in Turin in 1578, the shroud was displayed to the public several times per century, always drawing huge crowds. Before the exhibition of 1898, an official named Secondo Pia took the first photographs of his town's most famous relic. When he developed the film, he was shocked to see the negative — unlike the faint image on the shroud itself, the negative shows even more clearly, and with more detail, the image of a man. Pia's discovery rekindled international conversation about the shroud.

INVESTIGATING THE IMAGE

At several points during the 20th century, the church allowed scientists to examine the shroud closely. The largest of these examinations came in 1978, when an international group of scientists known as the Shroud of Turin Research Project, or STURP, were permitted to spend five days subjecting the shroud to an array of tests, with the ultimate goal of determining how the image was formed.

Theories about the image abounded. Some believed

1389年，法国特鲁瓦大主教皮埃尔·阿尔西开始关注这些骗局。他写信给教皇克莱芒三世，投诉说自1355年起一个叫做里雷的村庄里便在展出一块被称为基督裹尸布的亚麻布。这块大小4.36米×1.10米的布上有红色斑迹并显示出人的前后身形状。阿尔西确信这是伪造物，他在信中说人的形状是“巧妙地绘制”上去的，而且一艺术家已承认伪造了此物。这是有关都灵裹尸布的最初记载之一。尽管有阿尔西的警告，前往参观的人仍然络绎不绝。

1578年抵达都灵之后，裹尸布便开始向公众展出，每百年几次，总是吸引大批的参观者。1898年的展出前，一位叫塞康多·皮亚的官员对本城最著名的文物进行了首次拍摄。冲洗胶片时，他吃惊地看到了底片——与裹尸布本身的模糊图象不同

的是，底片上人的形象甚至更清晰、更详细。皮亚的发现使有关裹尸布的国际讨论再度升温。

展开调查

20世纪的某些时期，教堂允许科学家对裹尸布进行仔细研究。其中规模最大的一次是在1978年，从事都灵裹尸布研究项目的一组国际科学家得到允许对裹尸布进行为期五天的系列测试，最终目的是确认人体影像是如何形成的。

有关人体影像的理论为数众多。有些人认为是基督复活时分的闪光所留下

