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8

The Best from The 21st Century
— Science and Technology

何兆熊 选编

上海外语教育出版社

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Advanced method for car thieves

RESEARCHERS have said they have found a way to crack the code used by millions of car keys around the world. This could allow thieves to bypass the security systems on newer model cars.

The discovery was made by a team at Johns Hopkins University in the U.S. They say that the security system developed by Texas Instruments, a major key chip producer, could be cracked using a "relatively inexpensive electronic device".

The radio-frequency security system is used on more than 150 million new Ford, Toyota and Nissan cars. The system involves a transponder chip embedded in the key and

Follow me: Robot Dennis in a science centre in the Netherlands on February 17. Dennis is the first two-legged Robot that can move on a flat floor with a minimum of electronics and batteries carbon dioxide gas, air.



business & economy

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注释 何兆育

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编者前言

《21 世纪报》是由国内最大的英文报系《中国日报》主办,颇受广大读者、尤其是青少年读者欢迎的一份英文报纸。这份报纸之所以能拥有较大的读者群,无疑是因为它具有较高的可读性。所谓可读性体现在内容和文字两个方面。就内容而言,除了重大的国内外时事新闻外,这份报纸刊登的许多文章都是广大青少年读者感兴趣的,和他们的生活十分贴近;就文字而言,这份报纸的英语比较浅近,具有高中以上英语水平的人大体都能阅读。

尽快、尽好地掌握英语,是广大青少年的迫切愿望。大量阅读是学习外语的一种重要方法。但总的来说,目前适合青少年阅读的英语出版物还不够多。于是我们便萌发了从《21 世纪报》中挑选一些精粹文章汇编成册,以飨读者的想法。我们翻阅了 1995 年以来的《21 世纪报》,根据内容分别汇编成《文化篇》、《语言篇》、《科技篇》和《思考篇》四种,为扫除阅读过程中的障碍,我们对文集集中的部分生词、难点和难句作了一些注释。这样的读物具有很强的知识性和趣味性,读者不仅能获得大量有关世界各国的社会文化知识、有关英语语言的知识、最新的科技发展信息,学会不少做人的道理,同时也能提高自己的英语水平。可以说是“轻轻松松学英语”的一种好方式。

迄今为止,这套丛书已陆续出版了六册,其精彩纷呈的内容和多姿多彩的语言,吸引了广大英语爱好者和学习者。在他们的支持和鼓励下,我们又陆续从《21 世纪报》上挑选出了更多精彩内容,相信即将出版的《〈21 世纪报〉英语读物精粹》系列会给读者带来更新、更广阔的阅读体验。

对于这项选编工作,《21 世纪报》编辑部和外教社一直给予大力的支持,我们在此再次表示衷心的感谢。

2004 年 12 月

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A century of ideas and mayhem

PARIS — The 20th century has been an astonishing breeding ground for ideas, yielding^① inventions that have rendered life easier, healthier and longer than ever before, and given mankind the means to destroy itself.

Picture an inventor from 1900 who by some magic could catch a glimpse of life a century later.

He would recognize some machines, such as the car, the telephone or plane, that would have evolved from innovations^② of a century ago.

Some, such as spacecraft, lasers or deep-sea submarines, would have existed only as fanciful notions^③ in the minds of futurists of his time.

Yet others would have been inconceivable^④ to him: the computer, the Internet, nuclear power, genetic engineering and many more.

① yield 产生

② evolved from innovations of a century ago 从一个世纪前的新奇想法发展而来

③ fanciful notions 怪诞的想法

④ inconceivable 无法想像的

The past hundred years began with the horse and carriage, the ink pen and ledger,^① and knowledge that was confined to libraries and a tiny group of talents.

It ends with robots sent from the Earth to the farthest bounds of the solar system,^② e-mail and live satellite TV, the democratization of knowledge through the Internet, and medical breakthroughs that have made the plague, smallpox and cataracts the stuff of bible stories.^③

And more miracles are in the pipeline, as the century of physics yields to^④ the century of biotechnology.

Some time in the next year, molecular biologists will publish the first rough draft of the genome,^⑤ the map of what, chemically, makes up a human being.

“In just a few short years, we will have moved from knowing almost nothing about our genes to knowing everything,” said science writer Matt Ridley, in an upcoming book, “Genome — the autobiography of a species in 23 chapters.”

“I genuinely believe that we are living through the greatest intellectual moment in history. Bar none^⑥.”

Twenty-five years from now, according to some predictions, DNA chips could analyze a patient's genetic

① the ink pen and ledger 墨水笔和总账册

② solar system 太阳系

③ have made the plague, smallpox and cataracts the stuff of bible stories 把鼠疫、天花和白内障变成类似圣经故事那样的东西,即都成为过去

④ yield to 让位给……

⑤ rough draft of the genome 基因组的草图

⑥ Bar none. 用于强调前面一句所说的内容,bar 的意思是 except,在这里可译为“空前绝后”

makeup, allowing doctors to administer genetically-tailored^① medicine to cure types of cancer, heart disease and sickle-cell anemia.^②

Treatments may have been found for AIDS and for complex brain disorders, such as Parkinson's, Huntington's and mad-cow disease.

Nano-robots, the size of a germ, could swim through your bloodstream, measuring your body's vital signs or scouring the arteries free of dangerous deposits.^③

Yet there is also a dark side.

The 20th century began promisingly, with a shining faith in science as a vehicle for human progress. As Jules Verne, the French novelist, optimistically declared, "whatever one man is capable of conceiving, other men will be able to achieve."

But two world wars and a cold war took advantage of many brilliant minds to the business of destruction rather than progress.

On the brink of the 21st century, the attitude towards what goes on behind laboratory walls is frequently sowed with fear and cynicism.^④

Two of the greatest breakthroughs in knowledge — atomic fission^⑤ and DNA — have brought two of the greatest perils: the proliferation^⑥ of nuclear weapons and the risk of human cloning.

① genetically-tailored 根据基因配制的

② sickle-cell anemia 镰状细胞性贫血

③ scouring the arteries free of dangerous deposits 把动脉血管里的危险沉积物清洗掉

④ sowed with fear and cynicism 充满惧怕和愤世嫉俗的情绪

⑤ atomic fission 核裂变

⑥ proliferation 扩散

“Science has increased man’s control over nature, and might therefore be supposed likely to increase his happiness and well-being,” the philosopher Bertrand Russell once wrote.

“This would be the case if men were rational, but in fact they are bundles of passions and instincts^①.”

(21st-Agencies)

① they are bundles of passions and instincts 他们都是受感情和本能驱使的人,即非理性的

Medical milestones of the 20th century (I)

BOSTON — A century ago, the standard medicines in a doctor's bag included arsenic, mercury and other things that could kill before they cured.^① When these did not work, doctors might recommend mustard poultices^② to draw out imaginary poisons.

A physical exam often amounted to little more than looking at the patient's tongue. Undoubtedly, healers^③ often made people feel better, then as now. Wise practitioners have never underestimated the restorative powers of a reassuring touch.^④

Nevertheless, a trip to the doctor in those days was a dicey business at best.^⑤

-
- ① arsenic, mercury and other things that could kill before they cured
砒霜、水银以及其他在治好人之前就可能害死人的东西
 - ② mustard poultices 芥末膏药
 - ③ healer 治疗物
 - ④ restorative power of a reassuring touch 令人感到安慰的触诊所具有的恢复作用
 - ⑤ dicey business at best 最多也只是冒险

Despite all of the shortcomings of modern medicine — the cost, the impersonal reliance on technology, the many ills still beyond its reach — there has never been a better time to get sick than right now.

The revolution in medicine during the 20th century is mind-bending. What's changed? The real question is: What hasn't?

Slowly at first and then accelerating at mid-century, medicine retooled itself.

It became less art, more science. Purges and placebos gave way to things that actually worked. ①

Here are some essential landmarks of this metamorphosis. ②

Antibiotics③

Many argue this is the single most impressive medical achievement of the century.

The discovery began in the 1920s, when Alexander Fleming at St Mary's Hospital in London found that a mould, ④ which he identified as *Penicillium*, ⑤ killed staphylococci bacteria growing in a lab dish.

Ten years later, scientists from Oxford came across his write-up ⑥ and set about purifying the key substance. By D-day in 1944, there was plenty of penicillin to treat allied soldiers.

① Purges and placebos gave way to things that actually worked. 洗肠通便和只有心理效果的安慰剂让位给确实有效的治疗方法

② metamorphosis 质变

③ antibiotics 抗生素

④ mould 霉

⑤ *Penicillium* 青霉菌

⑥ write-up 报道

Soon streptomycin and other antibiotics followed. A new class of medicines, appropriately labeled miracle drugs, had been created. Suddenly, such implacable killers as tuberculosis, diphtheria, pneumonia, syphilis and tetanus were treatable. ①

X-rays

The German scientist Wilhelm Roentgen demonstrated the power of the X-ray in 1895, when he took a picture of the bones of his wife's left hand, but this profoundly important innovation did not make its way into routine care until the 1920s. The shadowy gray pictures literally opened a window into the body. Now doctors could see fractures, tumours, congested lungs. ②

Much more followed — ultrasound, CT scans, brain-scanning techniques such as PET scans and MRIs — each offering a different internal view of the body without actually invading it.

Maternal and infant care

In 1900, life expectancy in the United States was 48. Now it is 76. Much of this gain came in the first half of the century, before many of the big research breakthroughs, including antibiotics.

The major reason was vast improvements in public health — clean water, plumbing, ③ refrigeration and espe-

① such implacable killers as tuberculosis, diphtheria, pneumonia, syphilis and tetanus were treatable 像肺结核、白喉、肺炎、梅毒和破伤风这样的无情杀手都可以治疗了

② fractures, tumours, congested lungs 骨折、肿瘤、充血的双肺

③ plumbing 水暖设备

cially an understanding of the importance of sanitation^① during childbirth.

Women today are only about one-tenth as likely to die while giving birth as they were at the turn of the century. Childhood mortality^② plunged as well. Now only about 1 per cent of babies die before age 5 in well-off parts of the world.

Insulin^③

In the late 1800s, scientists realized that the pancreas^④ made something the body needed to burn sugar. In 1921, Frederick Banting and Charles Best of Toronto University isolated the active material in dogs. They gave it to a dog near death with diabetes,^⑤ and the animal quickly got better.

The next year, they tried a similar experiment on a dying 14-year-old boy. Almost immediately his blood sugar level fell, and within a few weeks he was able to go home, though dependent on injections of the newly isolated substance, insulin.

Large-scale production of the hormone^⑥ soon followed. Though it did not cure diabetes, it proved to be an important lifesaver.

-
- ① sanitation 卫生
 - ② mortality 死亡率
 - ③ insulin 胰岛素
 - ④ pancreas 胰腺
 - ⑤ diabetes 糖尿病
 - ⑥ hormone 荷尔蒙·激素