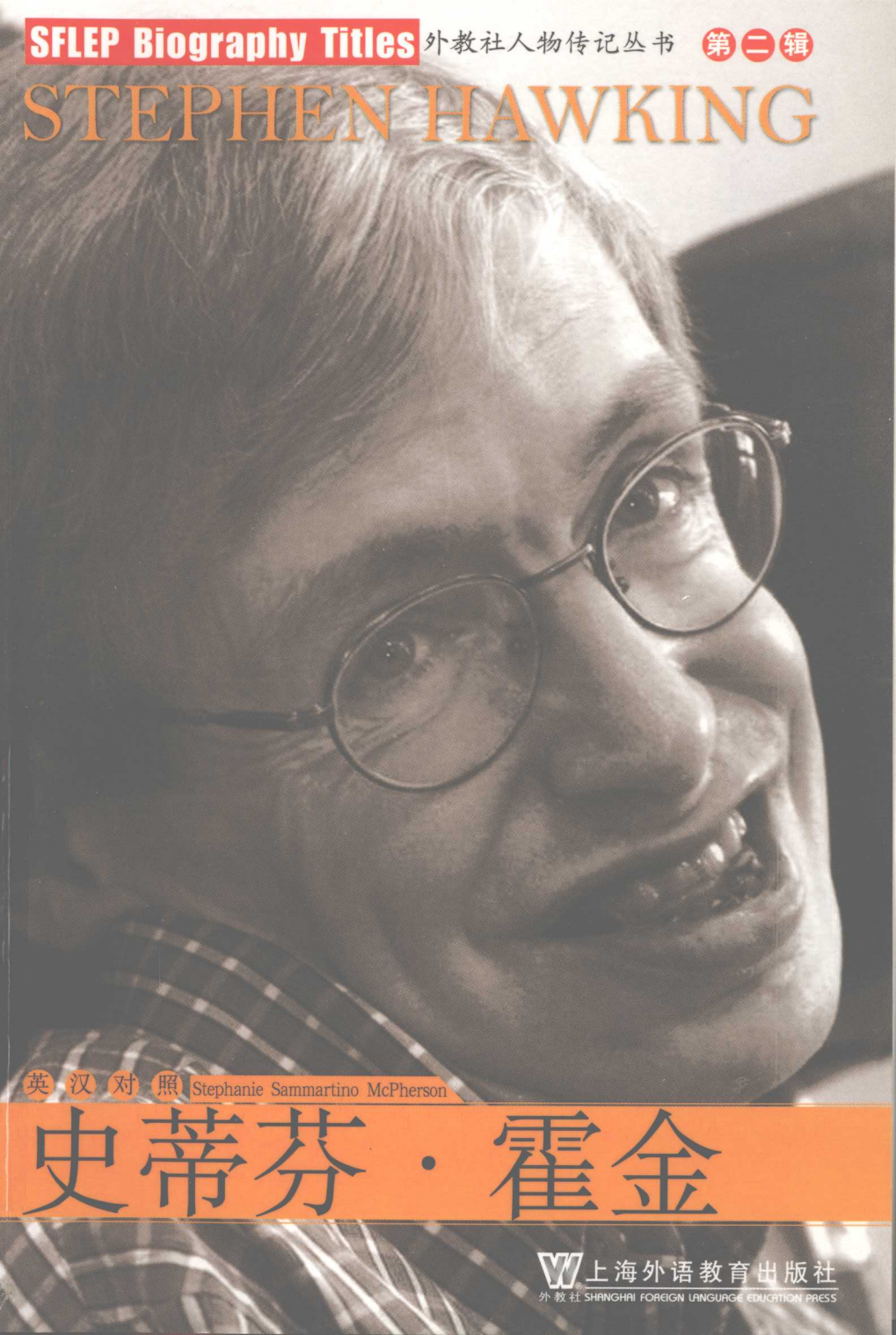


SFLEP Biography Titles 外教社人物传记丛书 第二辑

# STEPHEN HAWKING



英 汉 对 照 Stephanie Sammartino McPherson

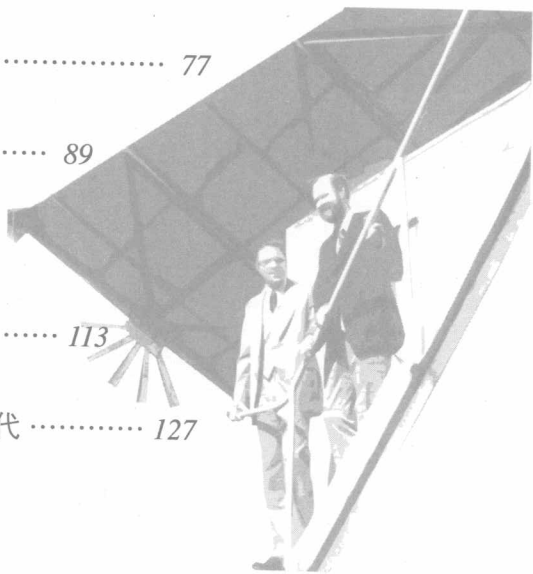
# 史蒂芬·霍金

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# 史蒂芬·霍金

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# STEPHEN HAWKING

# 史蒂芬·霍金

Stephanie Sammartino McPherson

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## 出版前言

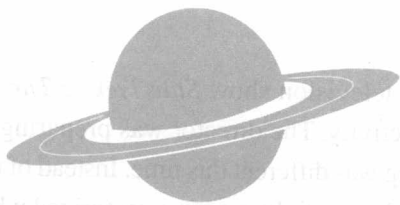
曾经有人做了一项调查，拥有最多读者的书籍是传记。阅读一本优秀的人物传记，往往可以使人振作精神，奋发图强，尤其对于青少年，阅读传记更可以使他们建立起正确的人生坐标，从而开拓美好的未来。

上海外语教育出版社从美国乐勒出版集团引进的“外教社人物传记丛书”就是这样一套奉献给青少年朋友的优秀传记丛书。本丛书第一辑13册自2006年初问世以来，得到了广大青年读者的认可和好评。为满足他们了解优秀人物、获取精神财富的需求，我社今年又隆重推出该丛书第二辑13册，包括诺贝尔和平奖获得者德兰修女、曼德拉，政坛风云人物拿破仑、丘吉尔，文学巨匠马克·吐温和简·奥斯丁，天才科学家霍金，影视娱乐界巨星乔治·卢卡斯、克里斯托弗·里夫和奥普拉·温弗瑞，环法自行车赛冠军兰斯·阿姆斯特朗，以及世界历史上著名的两位女王——伊丽莎白一世和克娄巴特拉。阅读这些著名人物的传奇人生，可以帮助青少年朋友们了解西方不同时代的社会历史背景，更能激励他们树立远大理想，以积极的态度直面人生的风雨。

这套传记丛书均由专门从事青少年文学创作的美国资深作家撰写，语言生动活泼，故事性强，引人入胜。外教社特邀一批在翻译方面颇有建树的年轻学者对丛书进行翻译和注释，希望英汉对照加注释这一形式能更好地帮助读者学习英语，享受阅读。

这套丛书特别适合高中生和大学一二年级的学生阅读。我们相信它必将成为青少年朋友们学习英语、探求人生真谛的好伙伴！





# INTRODUCTION

## 引言

STEPHEN HAWKING

It is a great pleasure to be invited to give the introductory lecture for the opening of the new millennium. It is a privilege to be able to speak with you on a topic that is so important to the future of our planet. In this introduction, I will discuss the challenges we face and the opportunities we have. I will also talk about the role of science and technology in addressing these challenges. I will conclude by discussing the importance of education and research in preparing us for the future.

The world is a wonderful place, full of beauty and wonder. But it is also a place that is facing many challenges. One of the most significant challenges is climate change. The Earth's climate is warming, and this is causing a range of problems, including rising sea levels, more frequent and severe weather events, and the loss of biodiversity. Another major challenge is the depletion of natural resources. We are using up our planet's resources at an alarming rate, and this is threatening the long-term sustainability of our civilization. Finally, there is the challenge of global inequality. There are still many people in the world who are living in poverty and lack access to basic necessities like food, water, and healthcare.

Science and technology have the potential to help us address these challenges. For example, renewable energy sources like solar and wind power can help reduce our dependence on fossil fuels and slow down climate change. Advances in agriculture and food production can help ensure that we have enough food to feed a growing population. And medical research and technology can help improve the lives of people who are living in poverty and suffering from disease.

However, science and technology alone are not enough. We also need to have a strong commitment to education and research. Education is the key to creating a better future for all of us. It helps us develop the skills and knowledge we need to solve the world's problems. Research is also essential because it allows us to discover new things and develop new technologies. We need to invest in education and research, and we need to make sure that the benefits of these investments are shared by everyone.

In conclusion, the future of our planet is in our hands. We have the power to make a difference, but we need to act now. We need to work together to address the challenges we face and to create a better world for ourselves and for future generations. I hope that this introduction has inspired you to think about the future and to take action to make it a better one.



The set<sup>[1]</sup> of the television show *Star Trek*<sup>[2]</sup>: *The Next Generation* buzzed with activity. The director was preparing to shoot another scene. But something was different this time. Instead of the regular actors, the attention focused on a slight man in a motorized wheelchair. He was almost completely paralyzed<sup>[3]</sup>, but his blue eyes sparkled with interest as he took in the details of the starship *Enterprise*.

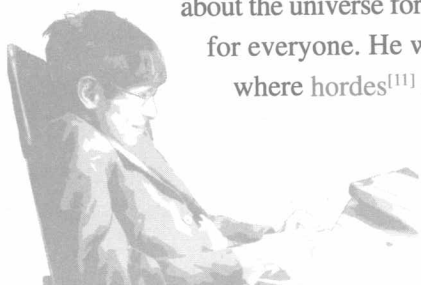
A throat operation eight years earlier had left the man unable to use his vocal cords<sup>[4]</sup>. But people wished to speak with him. As the man's fingers squeezed a switch, he was able to select and spell words on a portable computer screen. The message he put together was fed into a voice synthesizer<sup>[5]</sup>. In pleasant, artificial tones, the man "spoke", greeting people and expressing his appreciation of *Star Trek*.

In a way, the visitor had a great deal in common with the characters on the show. Their mission led them to distant parts of the galaxy. His adventures led him to new intellectual territory<sup>[6]</sup>. The questions he asked sounded impossible. Did time and space have a beginning? What really happens when a dying star collapses<sup>[7]</sup>? Are black holes gateways<sup>[8]</sup> to other universes?

These were topics as strange as any tackled<sup>[9]</sup> by *Star Trek*. Science fiction had met science fact in the person of world-famous physicist Stephen Hawking.

Even top scientists were sometimes hard-pressed<sup>[10]</sup> to understand Hawking's complicated theories. That didn't stop him from writing a book about the universe for a popular audience. He felt that science was for everyone. He wanted his book to be sold even in airports, where hordes<sup>[11]</sup> of travelers would see it.

Hawking's book, called *A Brief History of Time*, surpassed his wildest hopes.





- [1] set 表演戏剧或拍摄电影(片断)的舞台或场地
- [2] trek 艰苦的跋涉; 旅行; 远足; 一段旅程
- [3] paralyzed 瘫痪的
- [4] vocal cords 【复】解】声带
- [5] synthesizer 【电子】合成器, 综合器
- [6] territory (活动、知识等的) 领域、范围
- [7] collapses 倒塌, 塌陷; 瘵陷; 萎陷
- [8] gateways 出入口; 途径
- [9] tackled 着手处理, 对付, 解决
- [10] hard-pressed 处于强大压力下的
- [11] hordes 人群; 群, 帮, 伙

电视剧《星际旅行之新生代》的拍摄现场一片忙碌, 导演正准备拍摄下一个场景。和以往不同的是, 这次大家的注意力都不在影星身上, 反而关注一位电动轮椅里身材瘦弱的男子。那人几乎全身瘫痪, 但当他仔细端详“企业号”星际飞船时, 他蓝色的眼珠里满是好奇的神色。

八年前的一次咽喉手术让这个人再也无法用声带发声, 但人们都希望能与他交谈。他用手指按动开关, 就能在便携计算机屏幕上选择并拼出单词。经他组合成的信息会被输入声音合成器, 随后悦耳的人工语音就让这个男子得以“开口说话”, 他一边同大家互致问候, 一边表达他对《星际旅行》的感谢。

在某种程度上, 这位客人同电视剧里的角色倒相近甚多; 他们肩负使命前往星河深处, 而他的历险则将他引领进全新的知识领域。他的提问让人觉得不可思议: 时空有起源吗? 将要消亡的恒星在坍缩前究竟会发生什么? 黑洞会是通往其他宇宙的门户吗?

这些话题和《星际旅行》中解决的难题一样离奇。在世界著名物理学家史蒂芬·霍金的身上, 科幻小说与科学事实合二为一。

在霍金复杂的理论面前, 即便是一流的科学家也往往会冥思不得要领。但这丝毫不影响霍金为普通大众撰写宇宙科普读物的热忱, 他认为科学理应为大众服务。他甚至希望他的书能在机场里出售, 让熙熙攘攘的过客都能看到。

霍金所著《时间简史》带来的轰动, 远远超出

It became a runaway<sup>[1]</sup> best seller and was translated into thirty languages. The publicity turned Hawking into a science superstar. When the producers of *Star Trek* learned he was visiting southern California, a great idea took shape in their minds. They invited Hawking to do more than simply visit their studio.

In July 1993, when viewers tuned in to the season finale<sup>[2]</sup> of *Star Trek*, they witnessed an amusing card game. Data the robot, who could perform mathematical calculations at lightning speed, decided to pit his poker skills against the greatest geniuses of all time. He summoned up hologram<sup>[3]</sup> images of Sir Isaac Newton, Albert Einstein, and Stephen Hawking. Enjoying it immensely, Hawking played himself.

The scene gently spoofed<sup>[4]</sup> history's top physicists. When Hawking raised his bet by fifty dollars, Einstein was gleeful<sup>[5]</sup>. He predicted that Stephen would lose the game. But Hawking had a surprise for his friends. Grinning, he used a mechanical device to display his winning cards. On that triumphant note, a red alert was sounded aboard the *Enterprise*. Data was forced to cancel the poker game, and Hawking's cameo<sup>[6]</sup> role was over.

It was time to return to real life, and Hawking was ready. He once said that science fact can be even more astounding<sup>[7]</sup> than science fiction. To prove his point, Hawking mentioned black holes. He felt they were stranger than any idea from a science fiction novel. As a professor at Cambridge University in England, Hawking has never stopped trying to solve the mystery of black holes—and of the entire universe.





[1] runaway 迅速发生的; 轻易取得的; 控制不住的

[2] finale (戏剧的) 终场; 最后一幕

[3] hologram 【物】全息图

[4] spoofed 对……作幽默的讽刺

[5] gleeful 高兴的; 欣喜的

[6] cameo (电影、电视中通常由名演员担任的) 精彩的小角色

[7] astounding 令人震惊的

他最高的奢望。此书在畅销榜上一路领先, 并且被翻译成 30 种语言。各种宣传一下就让霍金成为科学巨星。当《星际旅行》的制片得知他正在南加州访问时, 他们脑海中马上闪现出一个伟大的创意: 他们要邀请霍金来, 但绝不仅仅只是单纯参观摄影棚。

1993 年 7 月, 当观众收看那一季《星际旅行》的大结局时, 他们看到一场令人称奇的扑克牌游戏。机器人 Data 能以很快的速度进行数学运算, 他决定与古往今来最伟大的天才们比一比打扑克牌的水平。他将艾萨克·牛顿爵士、阿伯特·爱因斯坦和史蒂芬·霍金的全息图像调集到一块儿。看到如此有趣的场景, 霍金亲自披挂上阵。

那场戏不免有些捉弄历史上赫赫有名的物理学家的意味。当霍金将赌注又加了 50 美元后, 爱因斯坦一阵窃喜, 他预测史蒂芬一定会输。但霍金早就暗藏一手, 只见他笑吟吟地用一个机械装置打出王牌。就在即将获胜的一刻, “企业号” 上发出红色警报。Data 不得不取消了这场扑克牌游戏, 而霍金的荧屏角色也宣告结束。

现在, 让我们回到现实, 霍金已经做好了准备。他曾经说: 科学事实其实比科幻小说更令人震惊。霍金以黑洞为例证明他的观点。他认为黑洞比任何科幻小说的元素都要离奇。作为英国剑桥大学的教授, 霍金一刻都未曾停止对黑洞、乃至整个宇宙之谜的探究。



# SCIENTIST IN THE MAKING

## 科学家的成长



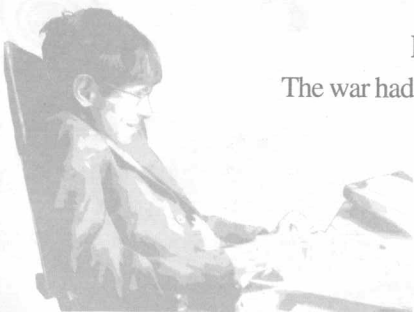
January 8, 1942, was special for two important reasons. It marked the three-hundredth anniversary of the death of Galileo, who is often considered the world's first true scientist. By an interesting coincidence, it is also Stephen Hawking's birth date. He is quick to point out, however, that "two hundred thousand other babies were also born that day" and that he doesn't "know whether any of them were later interested in astronomy<sup>[1]</sup>."

Great Britain was then in the middle of World War II (1939–1945). German air raids were a frightening and constant fact of life. Frank and Isobel Hawking wanted their son to be born someplace safe. Although they lived in London, the capital of Britain, Isobel went to Cambridge as the time of the birth drew near. There, the anxious parents could be sure that no bombs would endanger<sup>[2]</sup> their new baby. A special agreement between the warring countries guaranteed the safety of certain cities on both sides, and Cambridge was one of them.

Stephen was only two weeks old when his mother returned with him to London. Bombs still fell nightly, but the family decided to stick together and take their chances. One day, when Stephen was a toddler<sup>[3]</sup>, Isobel returned home to discover that a German V-2—a huge rocket-propelled<sup>[4]</sup> bomb—had exploded just several doors away from the Hawking residence. By that time, Stephen had a baby sister named Mary. Although both children had been out with their mother, Stephen's father had been home when the bomb hit. To Isobel's relief, he was not injured, and their house was only slightly damaged.

### Early Days in London

The war had ended by the time four-year-old Stephen began school. He attended Bryon House, a school that stressed the natural approach to learning.





1942年1月8日，因为两个重要的原因而显得很特别。其一，那天是被公认为世界上第一个真正的科学家——伽利略的三百周年忌日。其二，巧合的是，那天也是史蒂芬·霍金的生日。但是，如果谁提及这点的话，霍金会马上指出：那天还有20万婴儿出生，而且他“不知道其中是否有人长大后会对天文感兴趣”。

[1] astronomy 天文学

英国当时正处在第二次世界大战（1939—1945）期间。德国的空袭成为人们生活中挥之不去的恐惧。弗兰克·霍金和伊泽贝尔·霍金希望儿子能在安全的地方出生。尽管住在首都伦敦，但伊泽贝尔在预产期前便来到剑桥。在那儿，这对焦急的父母可以不用担心会有炸弹殃及到他们的新生儿。交战国之间的一份特殊协议确保双方的特定城市在战争中可以免遭涂炭，而剑桥正好是其中之一。

[2] endanger 危害；危及，使遭到危险

史蒂芬在两周时被母亲带回伦敦。虽然炸弹在夜间依旧不断，但霍金一家决定要碰碰运气，厮守在一块儿。当史蒂芬还在蹒跚学步时，一天，伊泽贝尔回家时发现一枚德制V-2——巨型火箭推进炸弹就在距他们家咫尺之遥的地方爆炸了。那时，史蒂芬还有个叫玛丽的小妹妹。虽然两个孩子都和妈妈外出不在家中，但爆炸发生时，史蒂芬的父亲正在家里。所幸，父亲并未受伤，他们的房子受损也不严重。

[3] toddler（1至2岁半的）学步的小孩

[4] propelled 推进；推动；驱策

### 在伦敦的孩提时光

4岁大的史蒂芬即将上学之际，大战已经宣告结束。他进入特别注重以自然方式进行学习的布瑞恩小学。



Teachers expected their students to learn at their own pace<sup>[1]</sup>, without being forced to repeat things over and over. Stephen took his time, only learning to read when he was eight years old. But he was bright and had a lively curiosity about all sorts of things.

Stephen's father was often away while his children were growing up. As a research doctor, he spent several months each year in Africa, where he investigated tropical<sup>[2]</sup> diseases. Stephen, Mary, and Philippa, who was born two years after the war, became used to his absences. Despite his lengthy periods away, Frank Hawking had a strong influence on his son's life. Stephen took it for granted that he would have a career in science like his father. From his mother, he learned the importance of working for social justice and for peace. Nuclear weapons had been used to end World War II. Isobel Hawking wanted to ensure that such destructive forces were never used again.

### Young Einstein?

When Stephen was eight years old, the Hawkings moved to Saint Albans, a city about twenty miles (thirty-two kilometers) from London. Although his parents weren't wealthy, they managed to buy a large old house. Stephen loved his new bedroom. It was an easy leap<sup>[3]</sup> from his window to the roof of the bicycle shed. He could come and go without using the front door. But that wasn't his only entry. According to his sister Mary, Stephen figured out eleven ways to get in and out of the house.

For several years, Stephen went to the local school at Saint Albans. His father hoped his son would eventually attend Westminster, one of the best schools in England. Unfortunately, thirteen-year-old Stephen was sick the day he was to take his scholarship test.

Since he missed the exam and his parents could not send him to Westminster without financial aid, he had to stay at Saint Albans after all.

