

英 汉 对 照

# 科学发展的故事

## The Story of Science

[英] 埃德蒙·亨特 著

李淑芬 张正举 译注

中国农业机械出版社

责任编辑 宋正良

THE STORY OF SCIENCE  
BY EDMUND HUNTER  
LADYBIRD BOOKS LTD

1973

\* \* \*

科学发展的故事

〔英〕埃德蒙·亨特 著

李淑芬 张正举 译注

\*

中国农业机械出版社出版

(北京市海淀区阜成路东钓鱼台乙七号)

重庆印制一厂印刷

新华书店北京发行所发行

新华书店经售

\*

787×1092 32开 7 印张 147 千字

1982年11月北京第一版 · 1982年11月重庆第一次印刷

印数：00,001—10,700 定价：0.66 元

统一书号：13216·009

社科新书目：65—157

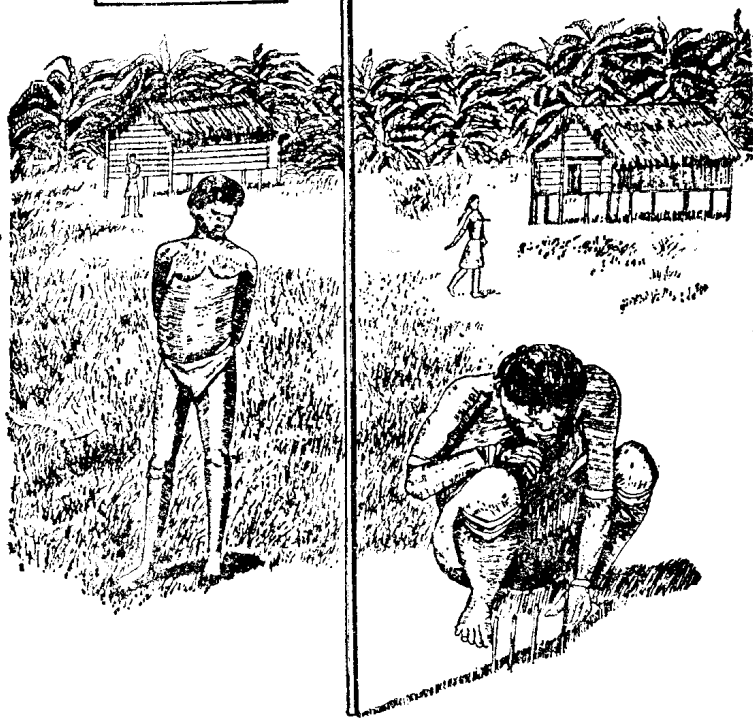
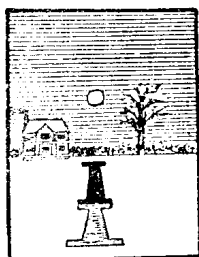


图 1

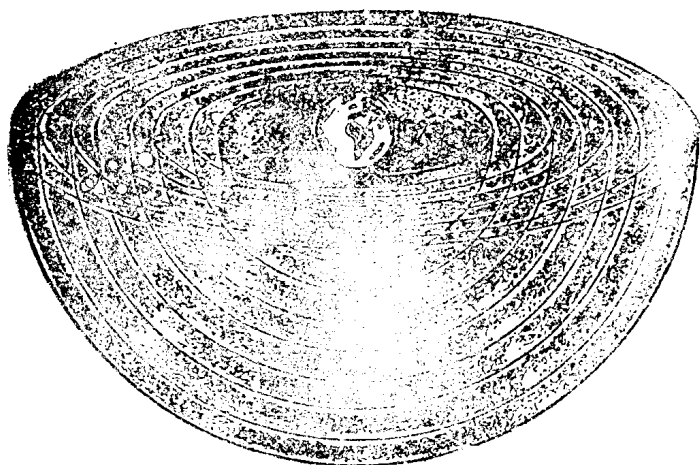
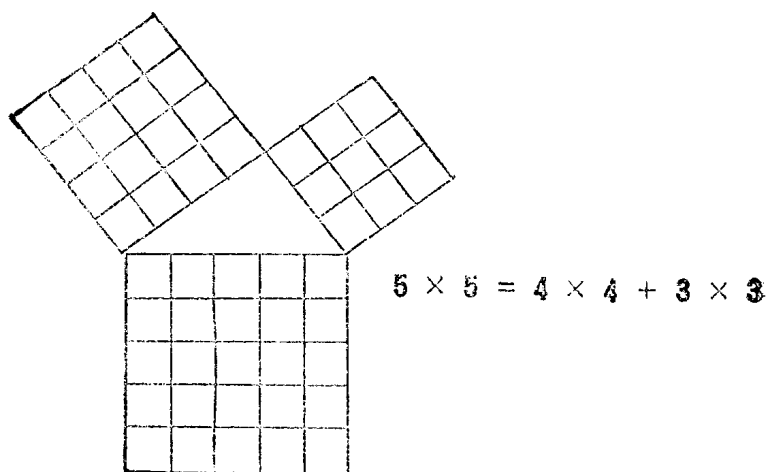


图 2

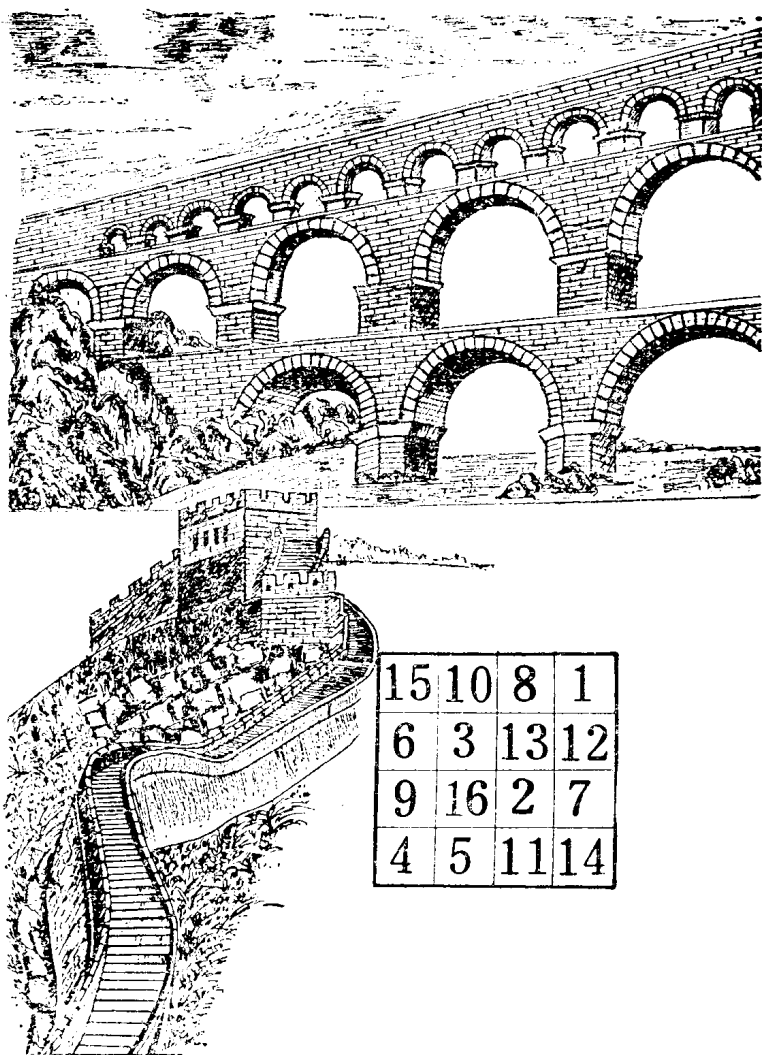


图 3

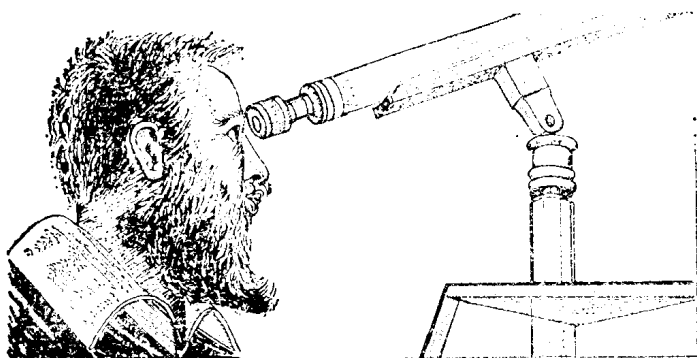


图 4

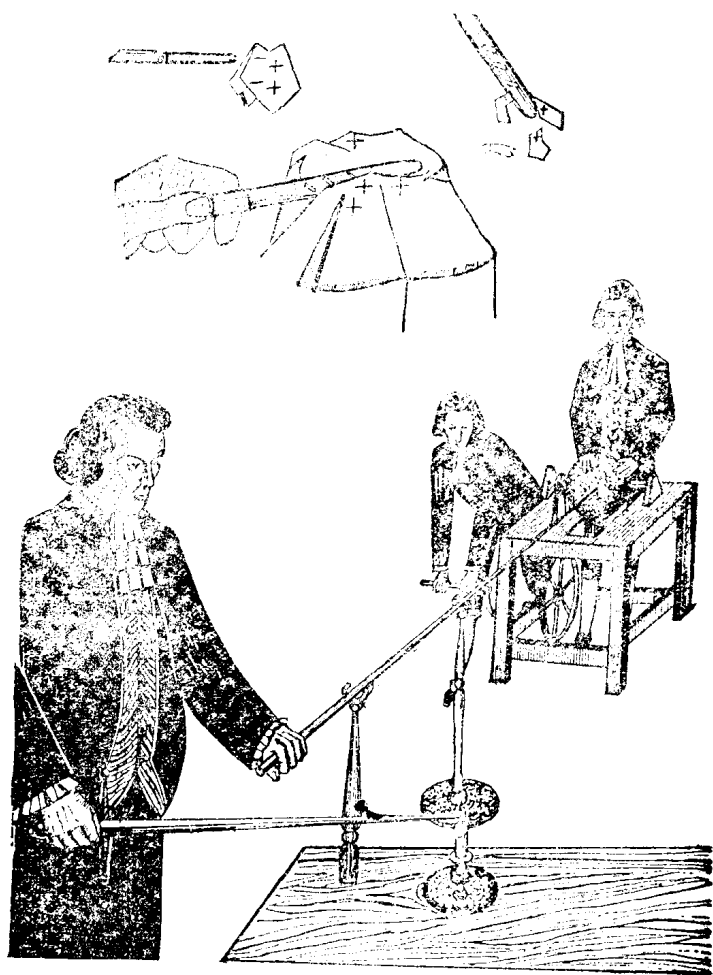


图 5

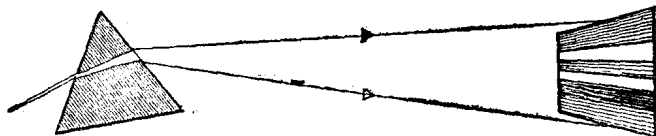
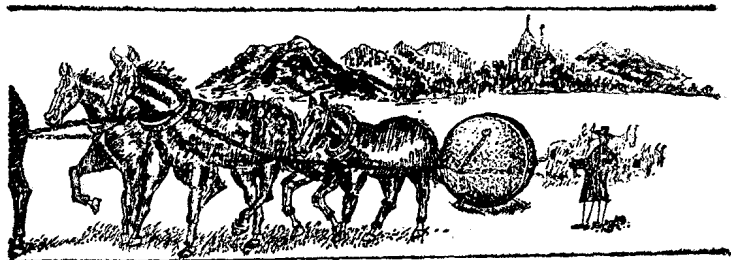
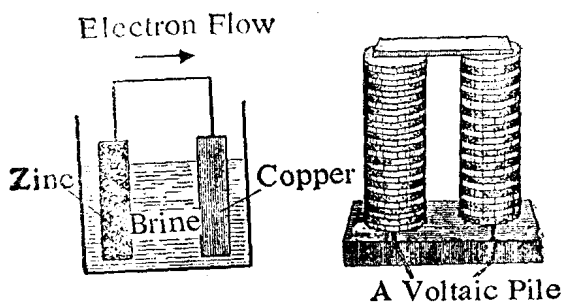


图 6



图 7

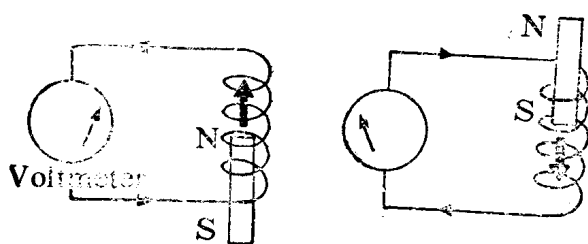


图 8

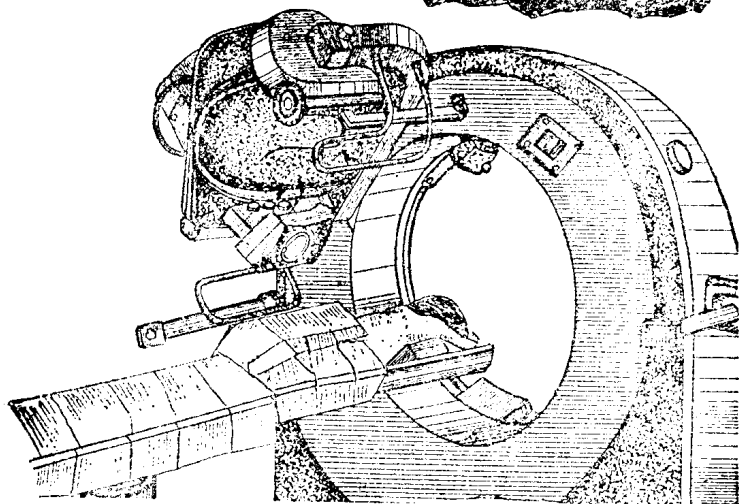
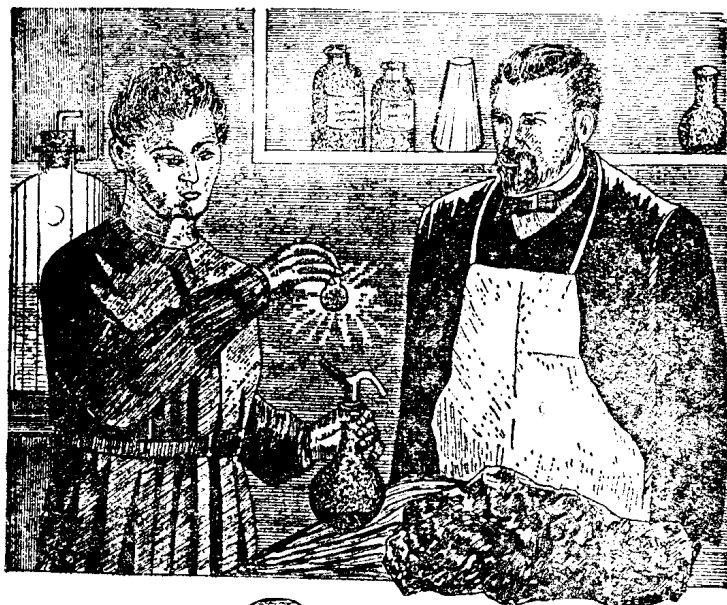


图 9

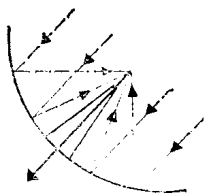
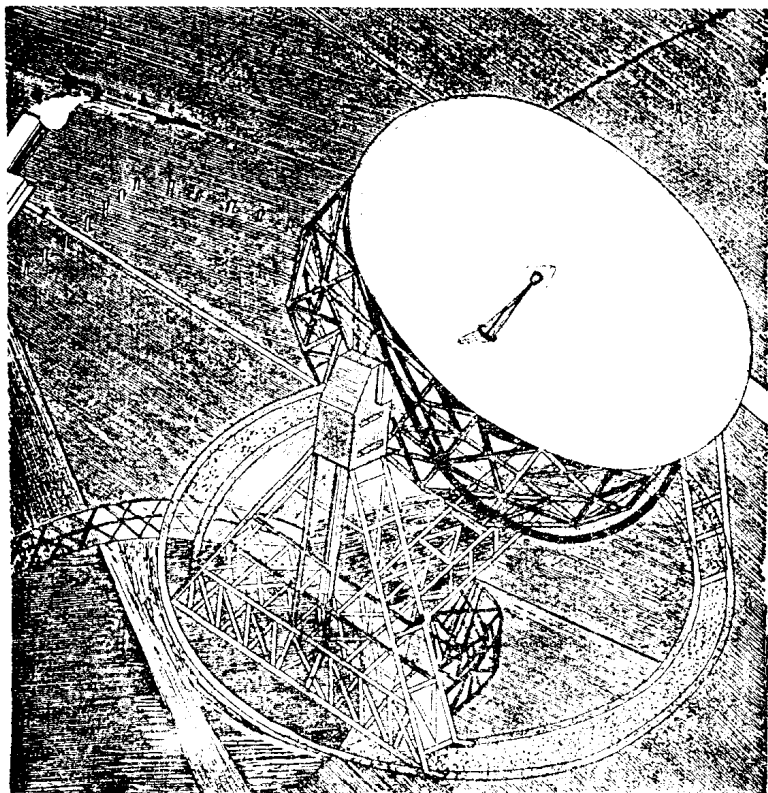


图 10

## 译注者的话

这本以英汉对照形式出版的《科学发展的故事》(The Story of Science), 是英国瓢虫丛书出版公司出版的科技成就丛书之一。书中系统地介绍了科学发展的历史进程, 记录了各个自然科学领域里许多最著名的科学家的光辉业绩。全书由48篇短文组成, 各自成篇, 但又互相联系。内容几乎包括所有基础科学的发展概貌。故事简明扼要, 读起来饶有趣味。从这本书中, 我们既可以获得许多有益的自然科学知识, 又可以学到不少有用的科技英语词汇和典型的英语句子结构。书中英语的语言流畅, 合乎规范, 难度适中, 适合理工科大学一、二年级学生、中学师生和其他自学英语的同志阅读。为了便于自学, 每篇文章之后除译文外还附有生词表和难点注释, 这样可能有助于提高读者的英语阅读能力与翻译能力。

1982年2月

## Contents 目 录

|                                                                |    |
|----------------------------------------------------------------|----|
| 1. The beginning of the story 科学史的开端.....                      | 1  |
| 2. Measuring time by the moon 阴历.....                          | 5  |
| 3. Measuring time by shadows 投影计时.....                         | 8  |
| 4. The beginnings of astronomy 早期天文学.....                      | 13 |
| 5. The importance of fire 火的重要性.....                           | 17 |
| 6. Early medical beliefs 早期医学.....                             | 21 |
| 7. New civilisations 新文明.....                                  | 25 |
| 8. New civilisations (continued) 新文明 (续) .....                 | 29 |
| 9. The Ancient Greeks 古希腊人.....                                | 33 |
| 10. Early physics-the basic elements 早期物理学——<br>四种基本要素 .....   | 37 |
| 11. Greek medicine and biology 古希腊医学和生物<br>学.....              | 41 |
| 12. Science moves to Alexandria 科学传到亚历山<br>大港.....             | 45 |
| 13. Euclid and Archimedes 欧几里德和阿基米德.....                       | 50 |
| 14. Measuring the world 测量地球.....                              | 55 |
| 15. Ptolemy-astronomer and map maker 托勒密——<br>天文学家和地图绘制家 ..... | 59 |
| 16. Science in Rome and China 罗马和中国的科学.....                    | 63 |
| 17. Chemistry 化学 .....                                         | 68 |
| 18. Science reaches the West 科学传到西洋.....                       | 72 |
| 19. Improvements in navigation 航海术的改进.....                     | 77 |
| 20. A changing world 变化的世界.....                                | 81 |
| 21. Leonardo da Vinci 列奥那多·达·芬奇.....                           | 85 |

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| 22. The new astronomy 新天文学.....                                    | 89  |
| 23. Changing ideas on the universe 宇宙观的改变.....                     | 93  |
| 24. Galileo and the telescope 伽利略及其望远镜.....                        | 97  |
| 25. The work of Galileo 伽利略的研究工作.....                              | 101 |
| 26. Isaac Newton 艾萨克·牛顿 .....                                      | 106 |
| 27. Mathematics and magnetism 数学与磁学 .....                          | 111 |
| 28. Early ideas about electricity 电的早期概念.....                      | 116 |
| 29. Volta, von Guericke and Isaac Newton 伏打、<br>v·格里克和艾萨克·牛顿 ..... | 122 |
| 30. New medical discoveries 医学新发现.....                             | 127 |
| 31. The development of the microscope 显微镜的<br>改进.....              | 131 |
| 32. Gases 气体.....                                                  | 135 |
| 33. Atoms 原子 .....                                                 | 140 |
| 34. Humphry Davy 1778—1829 汉弗莱·戴维.....                             | 144 |
| 35. Organic chemistry 有机化学.....                                    | 149 |
| 36. Bacteria and disease 细菌与疾病.....                                | 154 |
| 37. The fight against infection 预防感染.....                          | 158 |
| 38. Heat and the steam engine 热与蒸汽机.....                           | 163 |
| 39. Michael Faraday 米迦勒·法拉第.....                                   | 167 |
| 40. The beginning of scientific photography 科学照<br>相术的开端 .....     | 171 |
| 41. More efficient telescopes 高倍望远镜.....                           | 176 |
| 42. Cathode rays and X-rays 阴极射线与X射线.....                          | 180 |
| 43. The theory of the atom 原子论 .....                               | 185 |
| 44. Radio waves 无线电波 .....                                         | 190 |
| 45. Radio astronomy 射电天文学 .....                                    | 194 |
| 46. The secrets of life 生命之谜.....                                  | 199 |
| 47. Science and engineering 科学与工程.....                             | 203 |
| 48. Feeding the world 养活全球 .....                                   | 207 |

## 1. The beginning of the story

The story of science is the story of Man's efforts to understand himself and the mysterious universe around him. Perhaps it is really two stories because science has two main parts. One is the study of all natural things and might be called the search for knowledge<sup>1</sup>. The other deals with the use that Man has been able to make of the earth's resources<sup>2</sup> and the gradual development of man-made instruments, machines and materials. We could call this the science of technology.

It is believed that the earth's crust was formed more than a thousand million years ago<sup>3</sup>. Early Man probably made his appearance about two million years ago but it was not until about 7000 BC that people began to live in villages, cultivating plants for food and tending animals such as sheep and goats<sup>4</sup>. The arts of painting and carving were being developed, and it is certain that there was great interest in the surrounding lands and in the sun, moon and stars.

Man noticed how the sun brought light and warmth, how the stars appeared after dark, sometimes with the moon and sometimes without it. He noticed how the moon regularly changed its shape over the same period of time.

## 1. 科学史的开端

科学史是一部人类努力认识自己及探索周围世界奥秘的历史。或许这里所讲的实际上是两个方面的历史，因为科学分两大部类。一类是研究整个自然界的。这可称为“科学的探索”；另一类是研究人类如何开发利用地下资源，逐步研制仪器、机械和材料的过程的，这可称为“技术科学”。

人们认为，地壳形成于几百亿年以前。人类的始祖大约出现于两百万年以前。但只是到了公元前七千年，人们才开始住进村舍，种植庄稼，饲养绵羊、山羊等家畜。发展了绘画和雕刻艺术。人类对于周围的大陆，对于太阳、月亮和星体会倾注很大的兴趣那是很自然的。

人们注意到，太阳带来阳光和温暖；星星于天黑之后出现；而月亮则时有时无。人们也注意到，月亮怎样每隔相同的周期就有规律地变换其形状。

### New Words and Phrases

- |               |              |              |
|---------------|--------------|--------------|
| 1. mysterious | ['mɪstəriəs] | a. 神秘的，奥秘的   |
| 2. universe   | ['ju:nɪvɜ:s] | n. 宇宙，万物     |
| 3. perhaps    | [pə'hæps]    | ad. 也许，大概    |
| 4. search     | [sɜ:tʃ]      | n., v. 探索，研究 |
| 5. deal       | [di:l]       | v. 处理        |
| ~ with        |              | 对付，处理        |