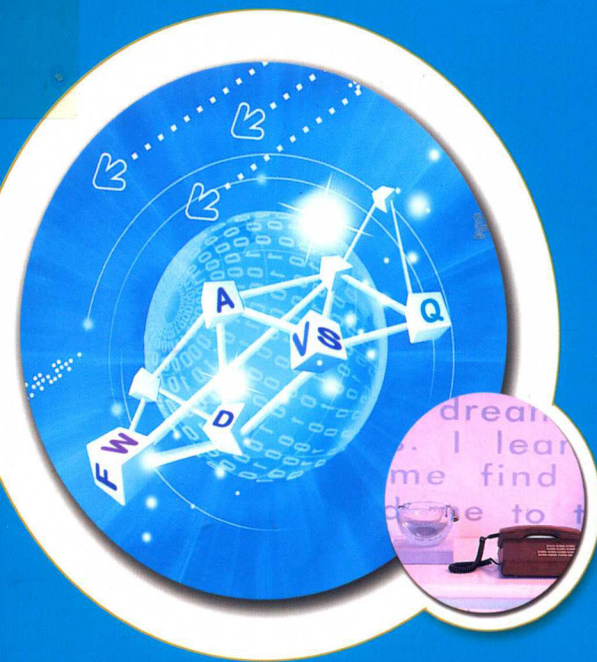




高等院校“十三五”规划教材·公共基础类



English

初级科技英语

阅读教程

崔青竹 田园 主编

Kchuji
KEJIYINGYU
yuedujiaocheng



中国海洋大学出版社
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主 编 崔青竹 田 园

本书依据《大学英语课程教学要求(教学大纲)》的要求，为理工科专业理工科学生对英语学习和阅读能力的培养，提供必要的科技英语阅读材料，让学生了解科技英语基本的阅读方法，为今后专业英语的学习打下良好的基础。本书可以在基础英语课程结束后，作为理工科专业学生的科技英语阅读教材使用。

本书由辽宁石油化工大学外语学院田园、崔青竹、李静、范琪、陈颖、赵红丹、胡静、马晓枫、宋佳参加编写。编者均在英语教学和教材编写方面有多年经验，并对于科技英语方面有所研究。本书作者在编写过程中，参阅了大量的国内外书籍和期刊，在此表示感谢。

由于编者水平有限，书中难免有不足之处，敬请使用本书的师生与读者批评指正，以便修订时改进。如读者在使用本书的过程中有其他意见或建议，恳请向编者(电子邮箱: qingzhu@163.com)及时反馈宝贵意见。



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内 容 简 介

本书根据教育部 2007 年颁布的《大学英语课程教学要求》编写,旨在培养学生的英语综合应用能力。本书共 10 章,20 篇课文,话题内容包括:交通运输、城市规划、电脑网络、人类智能、生态环境、生物学、能源、化学工艺、材料科学、航天技术。每章包含围绕一个科技领域的两篇阅读文章,每篇文章后配有阅读理解,以及词汇、语法的辅助练习;同时还附有科技英语词汇、语法、写作、翻译等方面的相关讲解;每章最后有一套英语练习题,以方便读者巩固或提高基础英语的水平。本书各章节及习题、讲解内容难度逐渐递增。

本书可作为高等院校理工科学生的专业英语学习,也可作为英语学习爱好者的参考资料。

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前 言

2007年教育部颁布的《大学英语课程教学要求》指出：“大学英语的教学目标是培养学生的英语综合应用能力，特别是听说能力，使他们在今后学习、工作和社会交往中能用英语有效地进行交际，同时增强其自主学习能力，提高综合文化素养，以适应我国社会发展和国际交流的需要。”然而，一些理工科专业的本科生发现，即使通过了大学英语四、六级考试，在大学三、四年级的专业英语学习方面还是觉得很难适应。这种状况会阻碍他们今后在专业方面的研究和进步。

本书依据《大学英语课程教学要求（教学大纲）》的要求和非英语专业理工科学生对英语学习和应用的需求编写。该书旨在通过对难度浅显的科技英语文章的阅读，让学生了解科技英语基本的阅读、翻译及写作特点，熟悉科技英语文章中常见的词汇、句型，从而对理工科学生今后专业英语的学习起到很好的推动作用。本书难易程度适合基础英语水平较高的大学一、二年级的学生，或大学三、四年级的学生作为课外拓展阅读。本书可以在基础英语以及理工科学生的专业英语学习之间起到很好的衔接作用。

本书由辽宁石油化工大学外语学院崔青竹、田园任主编，岳立志、李玥、范琪、陈颖、赵红丹、胡静、马晓枫、宋佳参加编写。编者均在英语教学和教材编写方面有多年经验，并对于科技英语方面有所研究。本书编者在编写过程中，参阅了大量的国内外书籍和期刊，在此表示感谢。

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Unit 1 Transportation 交通运输

Text A Chrysler Develops Plastic Cars as the Future

American carmaker Chrysler caught the attention of the world's automotive industry at the Frankfurt Motor Show by predicting that future cars would be made from the same plastic which is now used in soft drink bottles.

Chrysler's Composite Concept Vehicle (CCV) —on show in Germany—is a unique example of how some car builders see the future of motoring in the developing mass markets of countries such as China, Indonesia and the Third World.

“Before now you could have a lightweight car made of expensive, exotic materials or you could have an affordable car,” says Chrysler, “but you could not have both.”

Questions still hang over the special car-building version of the plastic “injection moulding” technology used to make “pop bottles” in the United States.

But Chrysler says if it does work out, it could ultimately change the way Chrysler make cars and trucks, especially for the market in the developing countries. Chrysler's CCV looks very much like French carmaker Citroen's famous small model car the “deux chevaux” (or “two horses” for the two horsepower motor) or 2CV, as it was known. Chrysler's CCV also has a very economical use of fuel—only 4.7 litres of gas or petrol is needed. The innovation lies in that it is almost 100 percent recyclable because of the special plastic construction.

The strangely shaped vehicle also features the durability and extra ground clearance that Chrysler says is needed for most roads in developing countries. The little sedan model car would be competitively priced between the cost of a motorcycle and a traditional cheap car or truck.

For Chrysler the potential revenue could be considerable but the company says interest in the project focuses more on the technology. An executive vice-president, Francois Castaing, says the company's initial direction was to develop a car that was as easy to assemble as a toy, using plastic sections moulded in advance.

“We saw that as being the key. For this vehicle to be affordable, it would have to be built easily, inexpensively and locally.”

To achieve that sort of bottom line, Chrysler decided to reduce drastically the number of pieces needed to build the car when it was ready for assembly. This number was cut by 75 percent—from more than 4,000 pieces for a conventional vehicle to about 1,100 pieces for the CCV.

The body consists only of four large composite sections which are fitted and bonded together. It is the first all-injection moulded car where the only steel used is in the chassis which forms the frame of the car. The use of plastic resins similar to those used of recyclable beverage bottles makes the CCV's body structure nearly 100 percent recyclable, easily repairable, structurally

sound and durable enough to take the pressure of the most punishing road surfaces.

Chrysler's aim was for simplicity but the company still managed to carve out enough technical innovations to support more than 20 new "patent pending" processes directly associated with the CCV.

The CCV's plastic body is the product of an 8,200-tonne moulding machine that injects a thermoplastic polyester, resin-based material into huge 145-tonne moulds. These are about the size of a big bedroom—three times larger than any other mould used in an automotive application. "CCV's entire body consists of two interior and two exterior sections—that's it," says Bernard Robertson, Chrysler's vice-president of engineering technologies, "by moulding parts in the color you want, like bits of a children's plastic building set such as Lego, we not only eliminate the need to paint the vehicle but we can add integrated trim features and mounting points on the vehicle for seats, head lamps, instrument panels and so on. With such big body sections we are able to dramatically reduce our tooling and assembly costs."

A traditional small American vehicle normally needs between 75 and 100 "stampings" (or massive industrial press actions which shape a car body from a flat piece of steel) in a plant of around 185,000 sq. m. of space. The space houses painting areas, body and engine assembly areas, and instrument and system delivery bays.

"For the CCV we can manufacture these vehicles in mass numbers in a 28,000 sq. m. plant or only 15 percent of the space," says Robertson. "Virtually everything we do in engine, stamping and assembly plants could be done under one roof. It would require only 6.5 hours to build each car compared to the 19 hours now needed to build small cars."

Other savings include tens of millions of dollars in regulatory costs alone in the United States, normally needed to cut down paint shop fumes from a construction plant, and the huge cost of setting up the paint shop in the first place.

All this is the positive side of the CCV project. There are disadvantages that Chrysler says it will have to overcome if the car is to be sold in developed countries, such as its ability to meet American and European crash standards without a steel substructure.

Other problems areas:

Improving the standard of repair to the body to match the original surface.

Ensuring the bonding of the big parts will last for the lifetime of the car.

Getting crash protection technology right.

Getting buyers to accept a matt body finish rather than a shiny paint exterior.

Chrysler has some marketing work to do on its CCV because while the car is cheap to buy, it is also cheap looking. But if the price can come right down to be not much more than that of a motorcycle and there are the advantages of a car that never rusts and can be easily repaired, Chrysler may well have a winning model for the future.

New Words

automotive *adj.* 汽车的

plastic	n. 塑料 adj. 塑料的
composite	adj. 组合的, 集成的, 混合的 n. 合成物
unique	adj. 独特的, 唯一的
exotic	adj. 异国的, 外来的
affordable	adj. 担负得起的, 不太昂贵的
ultimately	adv. 最后, 终于
economical	adj. 节俭的, 经济的, 合算的
injection	n. 注射, 喷入; 大量资金的投入
litre/liter	n. 升 (容量单位)
petrol	n. 汽油, 石油
innovation	n. 改革, 创新; 新观念, 新发明; 新事物, 新制度
recyclable	adj. 可再循环的
feature	v. 以……为特色 n. 特征
durability	n. 持久性, 耐用度
clearance	n. 间距, 净空; 清除, 清理
sedan	n. (美) 轿车
potential	adj. 潜在的, 有可能的; 电压的 n. 潜力, 可能性; 电位, 电压
revenue	n. 财政收入, 税收
considerable	adj. 可观的, 相当的, 重要的
executive	adj. 管理的 n. 执行者, 主管
initial	adj. 最初的, 开始的
assemble	v. 装配, 聚集
drastically	adv. 大大地, 彻底地; 激烈地
conventional	adj. 普通的, 常见的, 常规的
fit	v. 安装 adj. 适合的, 健康的
bond	v. & n. 连接, 结合
chassis	n. 汽车底盘
resin	n. 树脂 v. 用树脂处理
beverage	n. 饮料
sound	adj. 健全的, 完好的; 明智的; 彻底的, 完全的; 酣畅的, 香甜的 adv. 酣睡, 睡得沉 n. 声音, 响声 v. (使) 发出声音
punishing	adj. 十分吃力的; 使人筋疲力尽的; 严厉的
pending	adj. 悬而未决的; 迫近的
tonne	n. 公吨
thermoplastic	adj. 热塑性的 n. 热塑性塑料
polyester	n. 聚酯纤维, 涤纶
mould	n. 铸模, 模型; 性格, 气质 v. 用模子做, 浇铸
interior	adj. 内部的 n. 内部, 里面
exterior	adj. 外部的 n. 外部, 表面

eliminate	v. 除掉, 省略
integrated	adj. 集成的, 完全的, 综合的
trim	n. 装备, 一套用具; 修剪, 整齐 adj. 修剪的, 整齐的
dramatically	adv. 显著地, 引人注目地; 戏剧性地
stamping	n. 冲压过程
house	v. 为……提供住处 n. 房屋
bay	n. 架间距; 跨度; 海湾
manufacture	v. 制造 n. 制造(品), 产品
virtually	adv. 几乎, 差不多; 实际上
regulatory	adj. 管理的; 调整的
fume	n. [常用复数] (尤指浓烈、气味难闻、令人作呕的) 气, 烟
positive	adj. 积极的, 肯定的, 正面的
substructure	n. 基础, 底部结构
bonding	n. 焊接, 结合
mat/mat	adj. 无光泽的, 不光滑的 v. 使……无光泽
finish	n. 末道漆 v. 结束, 完成
rust	v. 生锈 n. 锈

Phrases and Expressions

catch the attention of	引起……的注意
mass market	大众市场
hang over	笼罩, 威胁
pop bottle	充气饮料瓶, 软饮料瓶
work out	解决, 弄懂, 算出
deux chevaux	(法) 两匹马
lie in	在于, 依赖于
extra ground clearance	超大离地间隙
in advance	提前, 预先
bottom line	(结算盈亏的) 底线
consist of...	由……组成
carve out	开辟
patent pending	申请中的专利
thermoplastic polyester	热塑性聚酯
resin-based material	树脂基材料
bits of	一堆, 一群
integrated trim features	集成内饰件
head lamps	车头灯, 前大灯
instrument panels	仪表盘
under one roof	在同一个屋檐下

paint shop	油漆车间
in the first place	起初, 首先
rather than	不是…… (而是)
may well	很可能, 不妨

Proper Names

Chrysler	克莱斯勒 (美国汽车制造商)
Frankfurt	法兰克福 (地名)
Composite Concept Vehicle (CCV)	组合概念车
Citroen	雪铁龙 (法国汽车公司)
Francois Castaing	弗朗索瓦·卡斯丁 (人名)
Bernard Robertson	伯纳德·罗伯逊 (人名)
Lego	乐高 (世界著名的拼装玩具公司)

Exercises

Comprehension

I. Choose the one that best answers the following question or completes the according to the text.

- According to the text, Chrysler predicts that future cars could be made from _____.
 - steel and iron
 - soft drink bottles
 - plastic
 - a newly developed material
- Concerning the production of this CCV, the difficulty lies in _____.
 - finance
 - technology
 - public taste
 - market
- According to the text, the remarkable advantage of this kind of new car is _____.
 - to occupy the market in developing countries
 - to earn money for the company
 - to save money for the company
 - that it can be easy to assemble as a toy
- Compared with a conventional vehicle, the number of pieces needed to build the CCV was cut by _____.
 - 2,900 pieces
 - 1,000 pieces
 - 4,000 pieces
 - 1,100 pieces
- The savings of producing plastic cars include _____.
 - tens of millions of dollars in regulatory costs
 - the huge cost of setting up the paint shop
 - less expense on both raw materials and plant area
 - all the above

II. Read through the text and answer the following questions briefly.

1. What is regarded as a unique example of how some car builders see the future of motoring in the developing mass markets of countries? (Para. 2)

2. As for this CCV, what is its remarkable difference from other cars? (Para. 5)

3. What makes the CCV's body structure nearly 100 percent recyclable, easily repairable, structurally sound and durable enough to take the pressure of the most punishing road surfaces? (Para. 10)

4. How many plants are needed to carry out these jobs relating to the engine, stamping and assembling? (Para. 14)

5. According to the author, what are some other advantages of this CCV besides its cheap price? (Para. 18)

Vocabulary

I. Choose the one that best fits into each blank.

- The chicken-feather chip is made from soybean resin and feathers crafted into a _____ material that looks and feels like silicon.
A. mixture B. combination C. composite D. blend
- The in-vehicle decoration remains a(n) _____ flavor from the Europe.
A. exotic B. strange C. extra D. unappealing
- The newly developed material is _____ and will not pollute the environment.
A. cheap B. affordable C. durable D. recyclable
- He bought this luxurious car at _____ expense.
A. considerate B. considerable C. average D. economical
- Nuclear weapons have made wars no longer _____.
A. normal B. conventional C. local D. destructive
- His rashness led _____ to his ruin.
A. especially B. initially C. ultimately D. easily
- At the end of this year, many complaint cases concerning the after-sale services given by your company are still _____.
A. pending B. impending C. massive D. strong

8. Nowadays there are many movies _____ shooting and violence.
 A. focusing B. specifying C. impressing D. featuring
9. This new system has _____ the need for checking the products by hand.
 A. reduced B. removed C. eliminated D. deprived
10. The spaceship can _____ at least 6 people.
 A. house B. live C. contain D. dwell

II. Fill in the blanks with the words given below. Change the form where necessary.

Note there are more words than necessary.

economical	automotive	assemble	revenue
fit	ultimately	regulatory	bond
virtually	finish	initial	integrate

- The Department of Health is the government's health adviser and _____ authority.
- _____ engineers are trying to satisfy buyers who also want their big cars to start and stop on a dime.
- His natural authority _____ him for a senior position.
- The new aircraft has performed very well in its _____ trials.
- _____ everyone in Tokyo takes the train to work.
- It is not easy for the minorities to completely _____ into the American society.
- He was giving the pictures a few _____ touches.
- The government's _____ is made up chiefly of taxes.
- After evaluating the cost on the project, we think it would not be _____ to go ahead with it.
- Some boys like to _____ model airplanes.

III. Choose the best answer on the right side of the paper to fill in each numbered blank.

Cars today are smart. But, they may not be smart 1 to change their own oil or find the lost coins in their seats, but they are smart and 2 smarter. The average car today has more computing 3 than the 1969 Apollo 11 spacecraft that carried the first astronauts to the moon. Every car produced today has 4 one computer for monitoring fuel consumption and pollution controls. The 5 car uses twelve computerized devices and high-end cars have many more, controlling 6 from the sunroof to the braking system.

In the near future, cars may be 7 stuffed with computer chips from front fender to tail-light. That's because motorists enjoy computerized gadgets and 8 these little devices is cheaper for automakers than building a better engine 9 making other engineering changes that might actually be more important.

Many of the smart features we are seeing today are safety- 10. Some are systems to 11 collisions. These may use sonar, radar, laser, computers, or video cameras, or some combination of these. These systems beep or warn drivers 12 a voice signal 13 the vehicle gets too close to an object or another vehicle or if it strays 14 its lane. The system can

suggest actions to the driver or even 15 take control to avoid accidents.

Another safety device is a smart airbag system. To deploy airbags with the 16 necessary force, sensors determine an occupant's weight and size and the 17 of impact. This system should reduce the number of children hurt by airbags that open too vigorously. Another system can 18 notify emergency services that an accident has happened and, using a Global Positioning System (GPS), can 19 the location of the vehicle for police and rescue units. This "mayday system" can save 20 minutes and many lives.

- | | | | |
|-----------------|---------------|------------------|----------------|
| 1. A. much | B. enough | C. quite | D. lot |
| 2. A. got | B. became | C. getting | D. changing |
| 3. A. ability | B. capability | C. wisdom | D. power |
| 4. A. at least | B. at most | C. at best | D. at large |
| 5. A. specific | B. average | C. advanced | D. modern |
| 6. A. nothing | B. anything | C. everything | D. something |
| 7. A. often | B. virtually | C. most | D. sometimes |
| 8. A. provided | B. raised | C. providing | D. raising |
| 9. A. but | B. even | C. and | D. or |
| 10. A. relating | B. related | C. relation | D. relate |
| 11. A. avoid | B. withdraw | C. escape | D. dodging |
| 12. A. for | B. of | C. from | D. with |
| 13. A. if | B. except | C. since | D. after |
| 14. A. into | B. out of | C. across | D. towards |
| 15. A. surely | B. slowly | C. temporarily | D. permanently |
| 16. A. minimum | B. maximum | C. massive | D. little |
| 17. A. serious | B. size | C. scale | D. severity |
| 18. A. actively | B. passively | C. automatically | D. positively |
| 19. A. seek | B. pinpoint | C. ensure | D. convince |
| 20. A. precious | B. important | C. numerous | D. countless |

Translation

I. Translate the following Chinese terms into English or vice versa.

- 组合概念车 _____
- 结算盈亏的底线 _____
- 超大离地间隙 _____
- 仪表盘 _____
- bits of _____
- under one roof _____
- in advance _____
- rather than _____

II. Translate the following sentences into Chinese.

- Questions still hang over the special car-building version of the plastic "injection mould-

ing” technology used to make “pop bottles” in the United States. (Para. 4)

2. The little sedan model car would be competitively priced between the cost of a motorcycle and traditional cheap car or truck. (Para. 6)

3. “We saw that as being the key. For this vehicle to be affordable, it would have to be built easily, inexpensively and locally.” (Para. 8)

4. Chrysler’s aim was for simplicity but the company still managed to carve out enough technical innovations to support more than 20 new “patent pending” processes directly associated with the CCV. (Para. 11)

5. Chrysler has some marketing work to do on its CCV because while the car is cheap to buy, it is also cheap looking. (Para. 18)

III. Translate the following sentences into English with the words or phrases given in the brackets.

1. 我国现代交通的发展吸引着全世界的目光。(catch the attention of...)

2. 两家公司的这次交易似乎笼罩着神秘的气氛。(hang over)

3. 克莱斯勒公司总是把质量放在第一位。(in the first place)

4. 我们家四世同堂。(under one roof)

5. 大多数人对车的要求是实用而非花哨。(rather than)

Text B Sub-rosa Subway

► Pre-reading Questions

1. Do you know the origin and history of our subway?
2. Have you ever taken the subway? Use several words to describe your experience.
3. In your opinion, what are the advantages of subway compared to buses and cars?

► Text

Imagine, if you will, a secret community dwelling beneath the streets of New York City, its inhabitants never allowed to travel to the surface or to interact in any way with the dreaded “Topsiders”. That’s the premise of an award-winning 1999 YA novel¹ by Neal Shusterman called *Downsiders*, exploring what happens when a 14-year-old Downsider named Talon defies the prohibition and ends up falling in love with a Topsider named Lindsay. Together, they uncover the mysterious origins of the Downsiders: a forgotten inventor named Alfred Ely Beach who created the array of tunnels over a century ago.

This is an instance where science fiction bumps up briefly against science fact, because Shusterman’s inspiration for his subterranean world is based on an actual person. Alfred Ely Beach is best known for his invention of New York City’s first concept for a subway: the Beach Pneumatic Transit, which would move people rapidly from one place to another in “cars” propelled along long tubes by compressed air. Beach was also the publisher of *Scientific American* back in 1845, when he purchased it (at the ripe old age of 20) with a fellow investor. (According to Wikipedia, inventor Rufus Porter actually founded the magazine, but sold it to Beach after a mere 10 months.)

Tunnels and pneumatic transportation systems are a staple of classic science fiction, starting with Jules Verne’s *Paris in the 20th Century* (1863), in which the author envisions tube trains stretching across the ocean. In 1882, Albert Robida described not only tube trains, but pneumatic postal delivery systems in his novel, *The Twentieth Century*. Those authors were quite prescient: versions of such systems were actually built, and some still exist today.

In 1812, a man named George Medhurst speculated that it might be possible to blow carriages laden with passengers through a tunnel, but he never got around to building anything. He lacked a pump with enough power to generate the requisite air pressure. In the mid-1850s, there were several rudimentary “atmospheric railways” —in Ireland, London, and Paris—and while the London Pneumatic Despatch system was intended to transport parcels, it was large enough to handle people. In fact, the Duke of Buckingham and several members of the company’s board of directors were transported through the pneumatic system on October 10, 1865, to mark the opening of a new station. And a prototype pneumatic railway was exhibited at the Crystal Palace in 1864, with plans to build a version connecting Waterloo and Charing Cross by running under the Thames.

Those early efforts inspired Beach back in the U. S. He published an 1849 article in *Scientific American* suggesting building an underground subway along Broadway in Manhattan, employing

horse-drawn cars to carry passengers. Then he discovered pneumatics: “A tube, a car, a revolving fan! Little more is required!” he enthusiastically exclaimed. This was better than boring old steam engines. The idea was to put people in carriages and propel them through underground tubes using air pressure generated by gigantic fans.

He first built a prototype above-ground model, which debuted at the 1867 American Institute Fair². It was little more than large wooden tube (roughly six feet in diameter and 100 feet long) capable of holding a small vehicle with a ten-person capacity, with a gigantic fan on either end. But he couldn't get permission from the city to construct an underground system. (Accounts differ as to whether “Boss” Tweed or wealthy residents blocked his efforts in a 19th century version of “NIMBY” — “not in my backyard”.)

Was Beach at all daunted? He was not. He sneakily built the underground pneumatic subway anyway, pretending he was really building a pneumatic mail delivery system, and he did it right under the nose of City Hall, beneath a rented store front across the street.

In February 1870, Beach unveiled his masterpiece, and it was an immediate novelty attraction for the public, especially given the luxury of the station: it boasted a grand piano, chandeliers, and a fully operational fountain stocked with goldfish. He fought for the next three years to get a construction permit to extend the line uptown all the way to Central Park. Alas, while he ultimately succeeded on that score, a stock market crash (the “Panic of 1873”) crushed his dream for good.

Beach's failure didn't keep others from speculating on so-called “vactrains” (vacuum tube trains). The U. S. government considered the possibility in the 1960s of running a vactrain (combining pneumatic tubes with maglev technology) between Philadelphia and New York City, but the project was deemed prohibitively expensive, and was scrapped.

An engineer with Lockheed named L. K. Edwards proposed a Bay Area Gravity-vacuum Transit system for California in 1967, designed to run in tandem with San Francisco's BART system³, then under construction. It, too, was never built. Nor was the system of underground Very High Speed Transportation conceived by Robert M. Salter of RAND in the 1970s to run along what we now call the Northeast Corridor.

Beach might not have lived to see his pneumatic subway system built—he caught pneumonia and died on January 1, 1896—but his vision is still influencing engineers in the 21st century, most notably researchers in the Chinese Academy of Sciences and Chinese Academy of Engineering. Apparently, traveling through networks of these vacuum tubes enables supersonic speeds without the drawback of sonic booms that plague supersonic jets, making the trip from London to New York in less than an hour. (Those of us who are increasingly disgruntled with the airline industry might welcome such an alternative while we're waiting for the physicists to get on the ball with human teleportation.)

And Beach's dream has been immortalized in a song by a Canadian progressive rock band called Klaatu⁴: Sub-rosa Subway. Nearly three minutest into the tune, you can hear a bit of Morse Code⁵ in the background, which one band member has since helpfully translated for their fans:

“From Alfred, heed thy sharpened ear—A message we do bring—Starship appears upon our sphere. —Through London’s sky comes spring.”

➤ Words and Expressions

inhabitant	<i>n.</i> 居民, 住户
premise	<i>n.</i> 前提
defy	<i>v.</i> 违抗, 不服从
bump	<i>v.</i> 突然, 增加, 提高
subterranean	<i>adj.</i> 地下的, 秘密的
pneumatic	<i>adj.</i> 压缩空气推动(操作)的
propel	<i>v.</i> 推进, 驱动
staple	<i>n.</i> 主要部分, 重要内容
prescient	<i>adj.</i> 有预知能力的, 有先见之明的
requisite	<i>n.</i> 必需品, 要素
rudimentary	<i>adj.</i> 简陋的, 不完善的
enthusiastically	<i>adv.</i> 热心的, 满腔热情的
debut	<i>v.</i> 首次登台, 初次露面
daunt	<i>v.</i> 使气馁, 使畏缩
sneakily	<i>adv.</i> 偷偷摸摸地
chandelier	<i>n.</i> 枝形吊灯
stock with	向(商店等)补充
deem	<i>v.</i> 认为, 断定
scrap	<i>v.</i> 取消, 放弃
in tandem with	与……同时(发生), 配合
supersonic	<i>adj.</i> 超音速的
disgruntle	<i>v.</i> 使不高兴
immortalize	<i>v.</i> 使不朽, 使名垂千古

➤ Notes

1. YA novel: 年轻成人小说 (Young-adult novel), 为小说类型之一, 目标是青少年和年轻的成年人。

2. American Institute Fair: 美国协会博览会, 成立于1829年, 由美国协会从1829年至1897年在纽约市举办, 尽管规模很小, 但人们认为这是美国历史上第一次世界博览会, 每年有3万多名参展商。

3. BART system: 旧金山湾区快速交通系统 (Bay Area Rapid Transit), 主要解决湾区内各个城市间(如旧金山、奥克兰、伯克利、戴利城等)的运输需求。

4. Klaatu: 克拉图, 来自加拿大的前卫摇滚乐队。该名称来源于电影《地球停转之日》中的外星人Klaatu。后来鼓手Terry Draper加入, 成为三人组。

5. Morse Code: 摩尔斯电码, 又称摩斯电码, 发明于1837年, 是一种时通时断的信号代码, 这种信号代码通过不同的排列顺序来表达不同的英文字母、数字和标点符号等。